Lake Lemon
Aquatic Vegetation Management Plan Update

February 8, 2006

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INTRODUCTION

This report was created in order to update the Lake Lemon Aquatic Vegetation Management Plan. The update will serve as a tool to track changes in the vegetation community, to adjust the action plan as needed, and to maintain eligibility for additional LARE funds. Items covered include the 2005 sampling results, a review of the 2005 vegetation controls, and updates to the budget and action plans. The plan update was funded by the Indiana Department of Natural Resources Lake and River Enhancement Program (LARE) and the Lake Lemon Conservancy District.

2005 SAMPLING RESULTS

Two surveys were completed in 2005 in order to document changes in the plant community and to determine success or failure of control techniques. A tier I (reconnaissance survey) and tier II survey (quantitative survey) were completed in May. These surveys allowed for the determination of control areas and the documentation of any changes in emergent and rooted floating plant community. A second tier II survey was completed in August. This survey was completed in order to document success or failure of the control technique and to compare to the 2004 tier II survey that was completed during the same month. This survey will also allow for the documentation of changes in the native plant community.

Tier I Survey Results

On May 12, 2005, a Tier I survey was completed on Lake Lemon. The tier I survey was completed in May, as opposed to late summer, in order to map Eurasian watermilfoil prior to treatment and obtain the maximum species diversity prior to the typical Lake Lemon summer algae blooms. Futrure tier I surveys should be completed in mid to late May or early June. The survey revealed fourteen distinct plant beds totaling 438.89 acres (Table 1 & Figure 1). Twelve different species were observed.

Table 1. Lake Lemon Tier I Survey Results, May 12, 2005

Plant Bed I.D.	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14
Plant Bed Size (acres)	16.9	18.5	16.3	161	127	2.4	5.8	55.2	2.3	15.3	7.3	2.5	9.9	1.8
	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Eurasian Watermilfoil	1	2	1	4	1		3	1	4	1	3	1	2	
Horned Pondweed	1	1						1		1			1	2
Chara	1	1	1											1
Curlyleaf Pondweed	1	2	3	2	1	1	2	3	1	2	1	1		
Water Willow	1	1	1	1	1			1	1		1	1		
Flatstem Pondweed		1						1						
Small Pondweed		1	1								1			
Coontail				2	1	2		1						
Elodea				1	1	2								
American Lotus				1	3	1	3							
Spatterdock				1	3	2	1							
Sago Pondweed								1						

*Columns denote vegetation rating with 1 being least dense and 4 being most dense

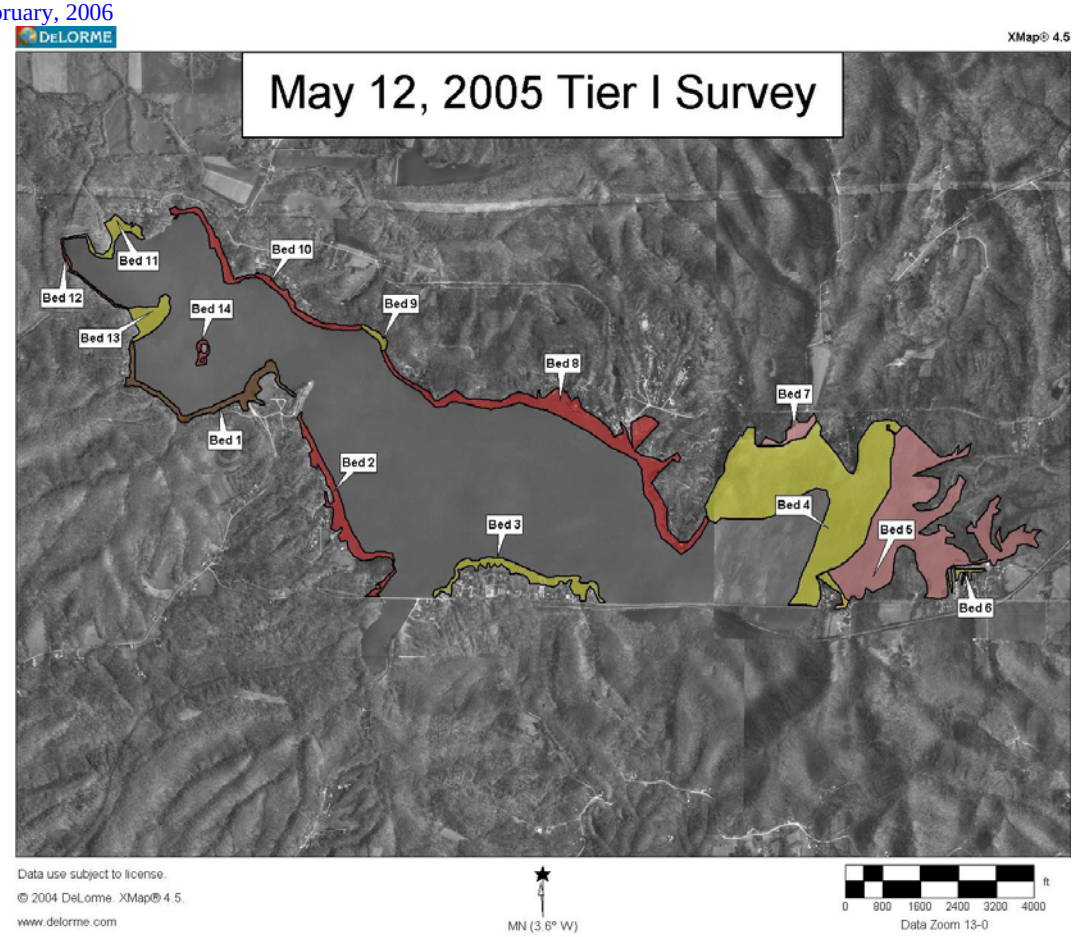

Figure 1. Tier I plant beds, Lake Lemon, May 12, 2005.

Plant bed 1 was located on the western side of the lake's southern shoreline (Figure 1). It was determined to be 16.92 acres in size. The substrate of plant bed 1 was silt with sand. A total of five species were observed within the plant bed. Eurasian watermilfoil (*Myriophyllum spicatum*), horned pondweed (*Zannichellia palustris*), chara, curlyleaf pondweed (*Potamogeton crispus*), and water willow (*Dianthera Americana*) were all present.

Plant bed 2 was located on the shoreline just southeast of plant bed 1 (Figure 1). This plant bed was determined to be 18.5 acres in size. The substrate of plant bed 2 was silt with sand. A total of seven species were observed within the plant bed. Curlyleaf pondweed and Eurasian watermilfoil were the dominant plant species. Flatstem pondweed (*Potamogeton zosterifomis*), horned pondweed, small pondweed (*Potamogeton pusillus*), chara, and water willow were present at the lowest abundance rating (less than 2%).

Plant bed 3 was located on the central part of the southern shoreline just east of plant bed 2 (Figure 1). Plant bed 3 was determined to be 16.34 acres and the substrate was silt with sand. A total of five species were observed within the plant bed. Curlyleaf pondweed was

the dominant species. Chara, small pondweed, Eurasian watermilfoil, and water willow were also observed.

Plant bed 4 was located in the eastern part of Lake Lemon including a small stretch of southern shoreline, and a larger portion of northern shoreline just west of plant bed 5 (Figure 1). Plant bed 4 was determined to be 161.05 acres. The substrate was silt and clay and a total of seven species were observed. Eurasian watermilfoil was the dominant species, followed by curlyleaf pondweed, and coontail (*Ceratophyllum demerum*). Elodea (*Elodea Canadensis*), American lotus (*Nelumbo lutea*), spatterdock (*Nuphar variegetum*), and water willow were also present. Eurasian watermilfoil had formed a dense matted bed in this area. This bed was the primary target of early control efforts.

Plant bed 5 was located in the easternmost portion of Lake Lemon to the immediate east of plant bed 4 (Figure 1). It was determined to be 127.19 acres. The substrate of plant bed 5 was silt and clay. A total of seven species were observed within the plant bed. American lotus and spatterdock were the dominant species. Curlyleaf pondweed, elodea, coontail, Eurasian watermilfoil and water willow were also observed within the plant bed. This plant bed was composed mostly of rooted floating vegetation. There were likely abundant emergent species within this plant bed that were not sampled due to the difficulty in accessing these areas.

Plant bed 6 was located in the eastern portion of Lake Lemon just to the south of plant bed 5 (Figure 1). It was determined to be 2.38 acres. The substrate of plant bed 6 was silt and clay. Five different species were observed. Spatterdock, coontail, and elodea were the dominant species. American lotus and curlyleaf pondweed were also present.

Plant bed 7 was located on the north side of plant bed 4 and was determined to be 5.84 acres (Figure 1). The substrate of plant bed 7 was silt and clay. Four different species were observed within the plant bed. Eurasian watermilfoil and American lotus were the dominant species, followed by curlyleaf pondweed. Spatterdock was present at the lowest abundance rating (less than 2%).

Plant bed 8 was located on the central northern shoreline just west of plant bed 4 (Figure 1). Plant bed 8 was determined to be 55.25 acres. The substrate was silt with sand. A total of seven species were observed within the plant bed. Curlyleaf pondweed was the dominant species. Coontail, Eurasian watermilfoil, flatstem pondweed, sago pondweed (*Potamogeton zosteriformis*), horned pondweed and water willow were also present.

Plant bed 9 was located just west of plant bed 8 along the north shoreline of Lake Lemon and was determined to be 2.26 acres. The substrate of plant bed 9 was silt with sand. There were three species observed in the plant bed. Eurasian watermilfoil was the most abundant species present in the plant bed. Curlyleaf pondweed and water willow were also observed in lower abundance in plant bed 9.

Plant bed 10 was located along the northern shoreline of Lake Lemon just west of plant bed 9. The plant bed was determined to be 15.31 acres. The substrate was silt with sand. There were three species present in plant bed 10. Curlyleaf pondweed was the most

abundant species in plant bed 10. Horned pondweed and Eurasian watermilfoil were also present at a lower abundance.

Plant bed 11 was located west of plant bed 10 along the northern shoreline of Lake Lemon and was determined to be 7.34 acres. The substrate was silt with sand. There were four species observed in plant bed 11. Eurasian watermilfoil was the dominant species in the plant bed. Curlyleaf pondweed, small pondweed, and water willow were also observed at the lowest abundance rating in plant bed 11.

Plant bed 12 was located at the westernmost part of Lake Lemon between plant beds 11 and 13. The plant bed was determined to be 2.5 acres. The substrate was silt with sand and three species were observed in plant bed 12. Eurasian watermilfoil, curlyleaf pondweed, and water willow were all observed at the lowest abundance rating in plant bed 12.

Plant bed 13 was located on the western shoreline on Lake Lemon just north of plant bed 1. The plant bed was determined to be 9.85 acres. The substrate was silt with sand. There were two species observed in plant bed 13, Eurasian watermilfoil and horned pondweed, with Eurasian watermilfoil the more abundant of the two species.

Plant bed 14 was located around the islands north of plant bed 1. The plant bed was determined to be 1.81 acres. The substrate was silt with sand. There were two species observed in plant bed 14, horned pondweed and chara, with horned pondweed the more abundant of the two species.

Tier II Survey Results

Two tier II surveys were completed on Lake Lemon in order to document the changes in the plant community. Surveys were completed on May 12, and August 16, 2005. These surveys also acted as a valuable tool to determine the success or failure of control techniques.

May tier II survey

On May 12, 2005 a Tier II survey was completed on Lake Lemon immediately following the Tier I sampling. A Secchi disk reading was taken prior to sampling and was found to be 4.5 feet. Lake Lemon was unusually clear during this survey (Secchi readings typically run 2-3 feet). Plants were present to a maximum depth of 9 feet. Two hundred sites were randomly selected within the littoral zone. Results of the sampling are listed in Table 2. Overall aquatic vegetation distribution and density is listed near the top of Table 2 and abundance and distribution of vegetation is illustrated in Figure 2. The bottom half of Table 2 illustrates the frequency of occurrence, relative density, mean density, and dominance index of individual species collected from Lake Lemon in May 2005.

Table 2. Lake Lemon, Tier II Survey Results, May 12, 2005

Date:	5/12/2005		Littoral sites with plants:	145		Species diversity:	0.76
Littoral depth (ft):	9		Number of species:	10		Native diversity:	0.77
Littoral sites:	199		Maximum species/site:	4		Rake diversity:	0.75
Total sites:	200		Mean number species/site:	1.35		Native rake diversity:	0.65
Secchi:	4.5		Mean native species/site:	0.49		Mean rake score:	1.83

Common Name	Site frequency	Relative density	Mean density	Dominance
Eurasian watermilfoil	48.00	0.72	1.50	14.40
Curlyleaf pondweed	38.00	0.53	1.38	10.50
Coontail	19.50	0.42	2.15	8.40
Horned pondweed	10.50	0.11	1.00	2.10
Elodea	6.50	0.11	1.62	2.10
Flatstem pondweed	5.00	0.05	1.00	1.00
Sago pondweed	2.50	0.03	1.00	0.50
Small pondweed	2.50	0.03	1.00	0.50
Chara	2.00	0.02	1.00	0.40
Liverwort species	0.50	0.01	1.00	0.10
Unidentified pondweed	0.50	0.01	1.00	0.10

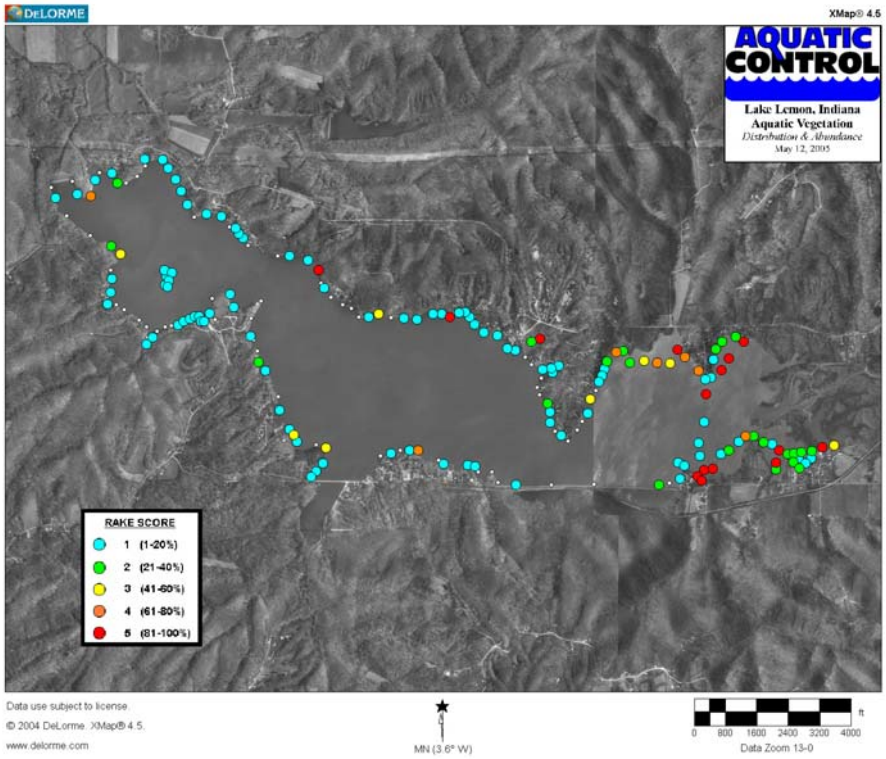

Figure 2. Aquatic vegetation distribution and abundance, Lake Lemon, May 12, 2005

A total of ten species were collected, eight of which were native (an immature pondweed was also collected, but due to its early stage of growth it was impossible to identify). Curlyleaf pondweed and Eurasian watermilfoil were the only exotic species collected. Eurasian watermilfoil was present at the highest percentage of sample sites (48%) and also the highest relative density. Location and density of Eurasian watermilfoil is illustrated in Figure 3 (in species location and density figures, plant location is illustrated by a color coded dot, the color of the dot represents the density of the species and sample sites without that species are illustrated by a smaller white diamond). Curlyleaf pondweed ranked second in frequency of occurrence (38%) and relative density (Figure 4). Coontail ranked third in frequency of occurrence (19.5%) and relative density (Figure 5). Horned pondweed ranked fourth in frequency of occurrence (10.5%). Elodea ranked fifth in frequency of occurrence (6.5%) and fourth in relative density (Figure 6). Flatstem pondweed ranked sixth in frequency of occurrence (5%) and relative density. Sago pondweed, small pondweed chara, liverwort (*Ricciocarpus* sp.) and an unidentified pondweed were also collected.

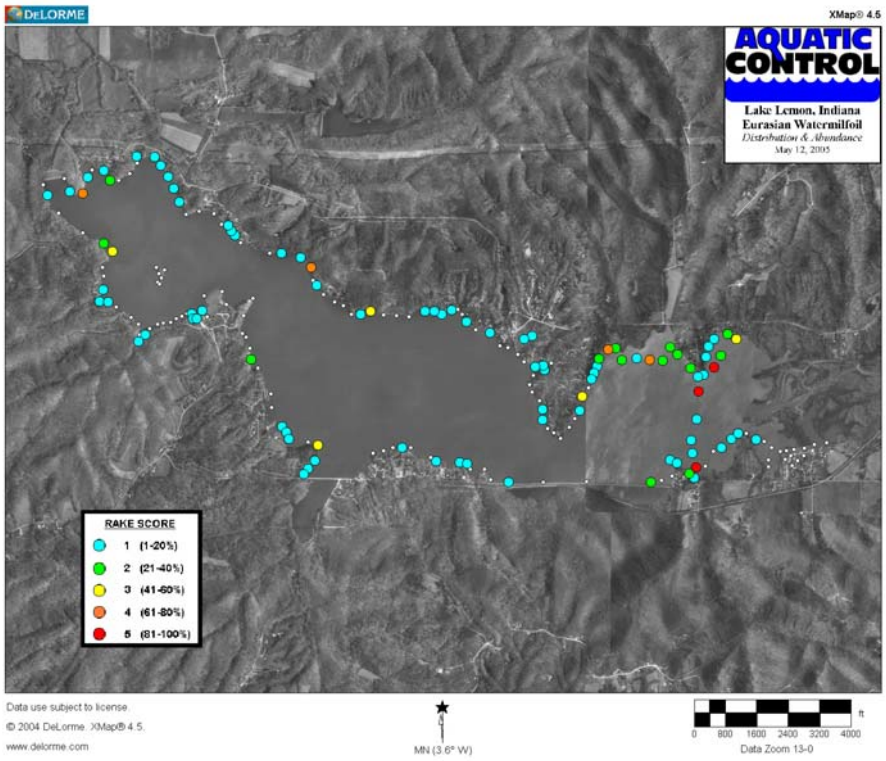

Figure 3. Lake Lemon, Eurasian watermilfoil distribution and abundance, May 12, 2005.

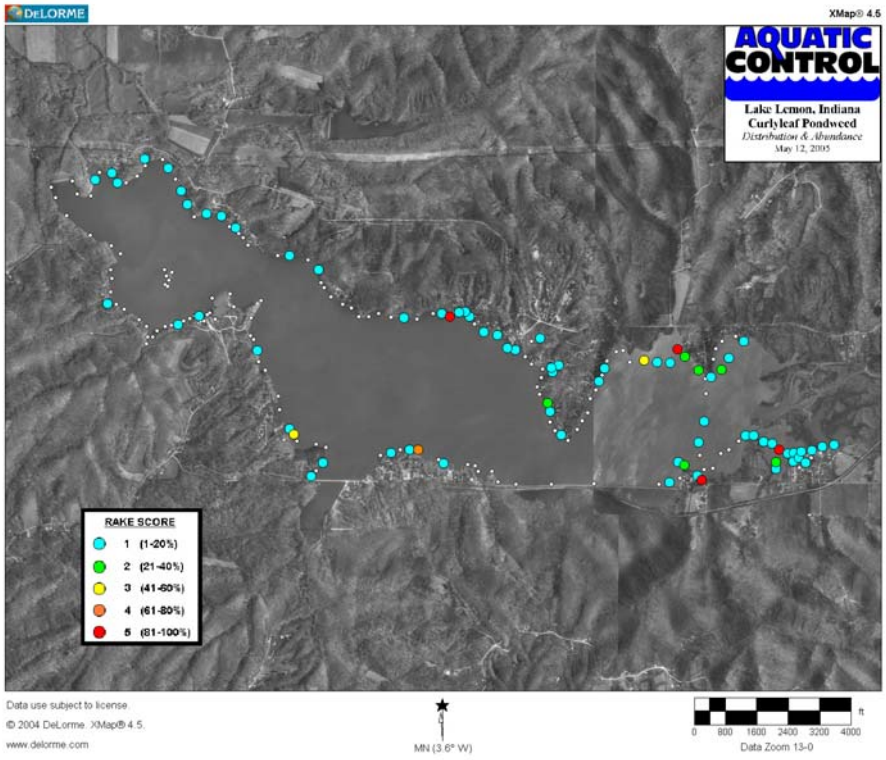

Figure 4. Lake Lemon, curlyleaf pondweed distribution and abundance, May 12, 2005.

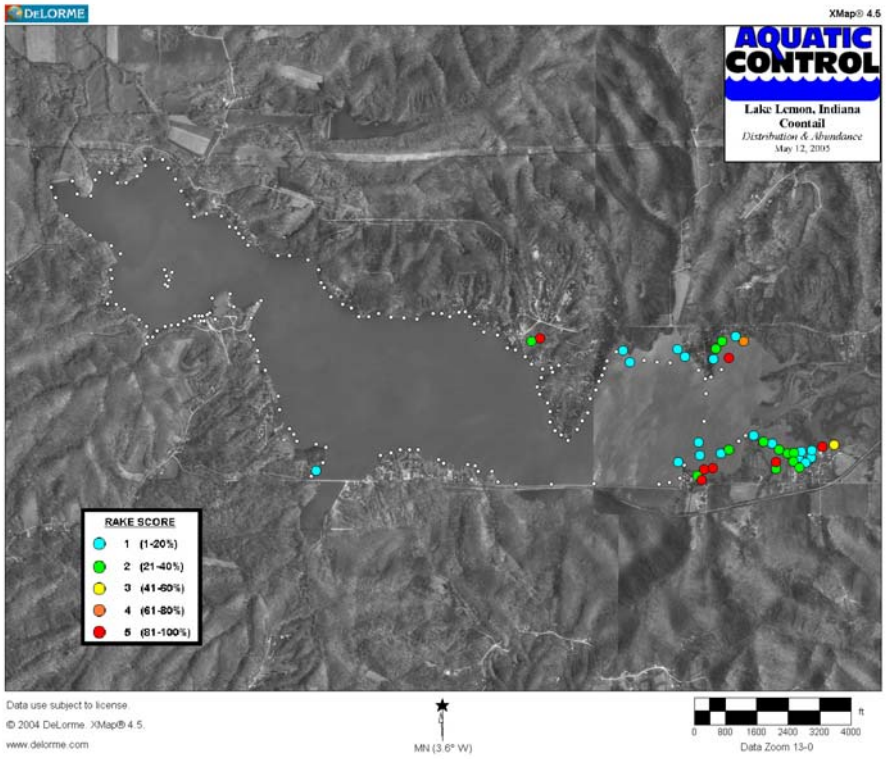

Figure 5. Lake Lemon, coontail distribution and abundance, May 12, 2005.

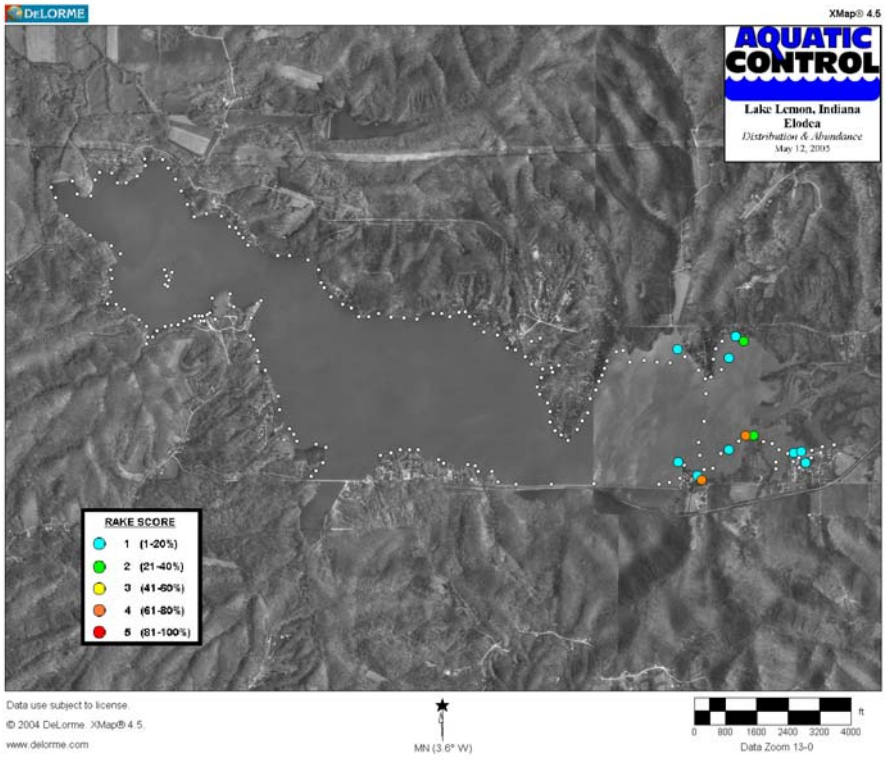

Figure 6. Lake Lemon, elodea distribution and abundance, May 12, 2005

August Tier II survey

The second round of Tier II sampling took place on August 16, 2005. A Secchi disk reading was taken prior to sampling and was found to be 1.5 feet (there was a severe planktonic algae bloom taking place). Plants were present to a maximum of 6 feet. The same two hundred sites were sampled in August as were in May. Results of the sampling are listed in Table 3. Overall aquatic vegetation distribution and density is illustrated in Figure 7.

Table 3. Lake Lemon, Tier II Survey Results, August 16, 2005.

Date:	8/16/2005		Littoral sites with plants:	96		Species diversity:	0.72
Littoral depth (ft):	6		Number of species:	7		Native diversity:	0.62
Littoral sites:	174		Maximum species/site:	3		Rake diversity:	0.60
Total sites:	200		Mean number species/site:	0.63		Native rake diversity:	0.49
Secchi:	1.5		Mean native species/site:	0.51		Mean rake score:	2.23

Common Name	Site frequency	Relative density	Mean density	Dominance
Coontail	32.2	0.80	2.50	16.1
Eurasian watermilfoil	14.4	0.18	1.24	3.6
Brittle naiad	13.2	0.23	1.74	4.6
Small pondweed	7.5	0.09	1.23	1.8
Elodea	2.3	0.02	1.00	0.5
Sago pondweed	1.7	0.02	1.00	0.3
Flatstem pondweed	1.1	0.01	1.00	0.2

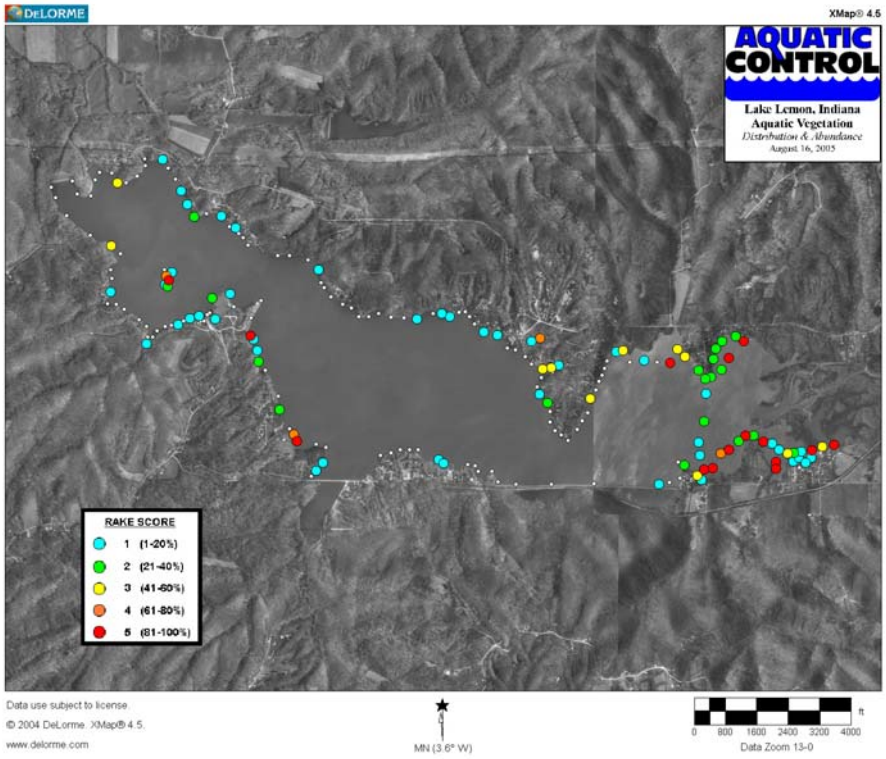

Figure 7. Lake Lemon, Overall aquatic vegetation distribution and density, August 16, 2005.

A total of seven species were collected of which six of the species were native. Eurasian watermilfoil was the only exotic species collected. Coontail was present at the highest percentage of sample sites (28%) and also the highest relative density (Figure 8). Eurasian watermilfoil ranked second in frequency of occurrence and third in relative density. Eurasian watermilfoil decreased in all these categories compared to the May 12,

2005 Tier II survey. Location and density of Eurasian watermilfoil is illustrated in Figure 9. Brittle naiad (*Najas minor*) ranked third in frequency of occurrence and relative density (Figure 10). Small pondweed ranked fourth in frequency of occurrence and relative density (Figure 11). Elodea, sago, and flatstem pondweed were also collected.

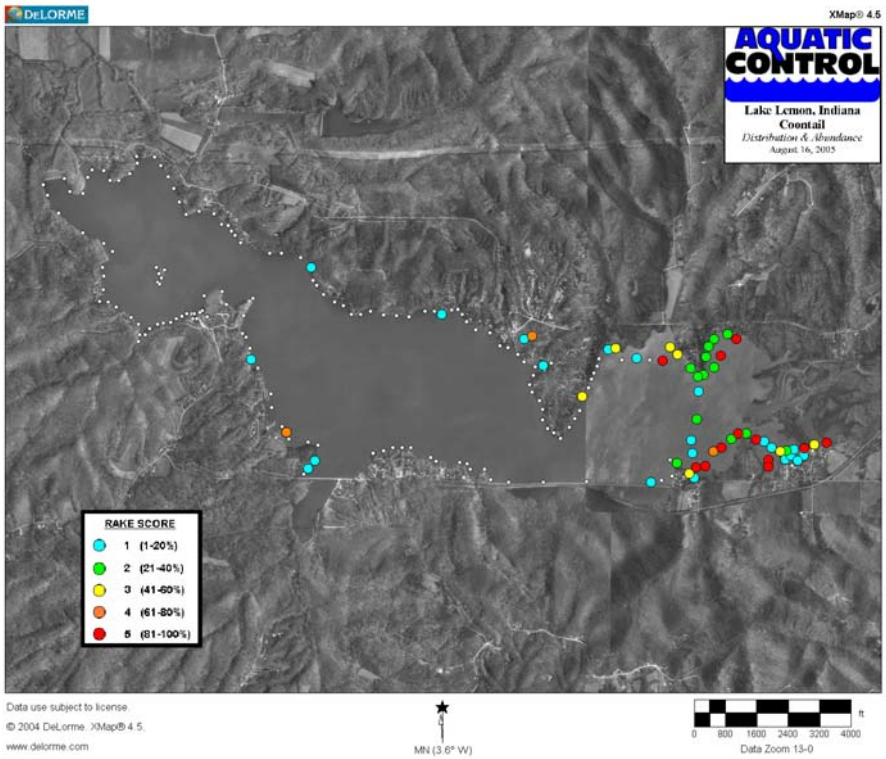

Figure 8. Lake Lemon, coontail distribution and abundance, August 16, 2005.

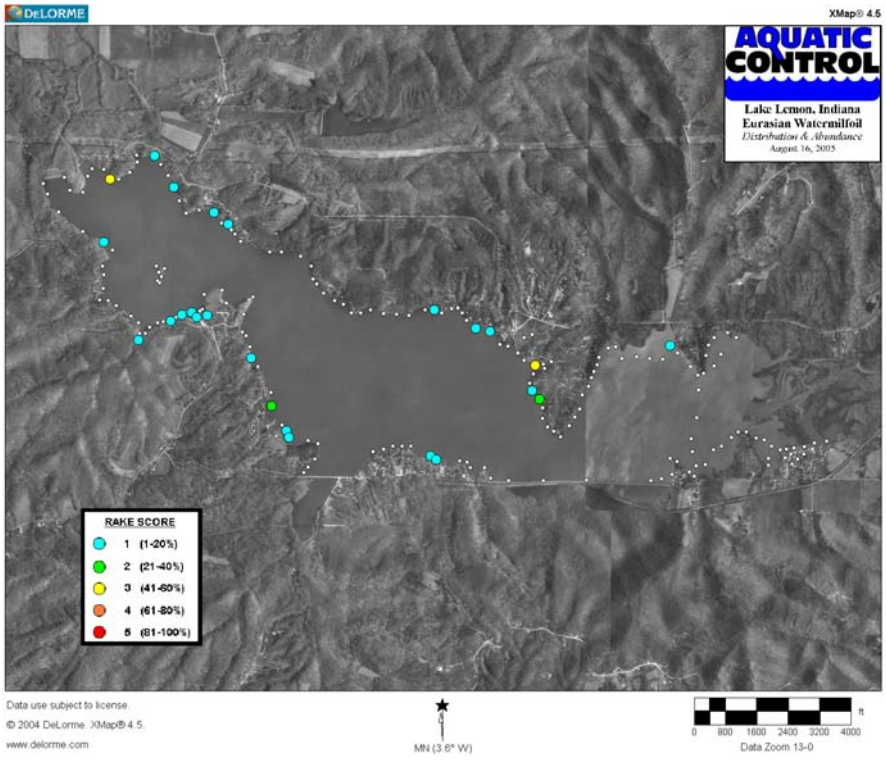

Figure 9. Lake Lemon, Eurasian watermilfoil distribution and abundance, August 16, 2005.

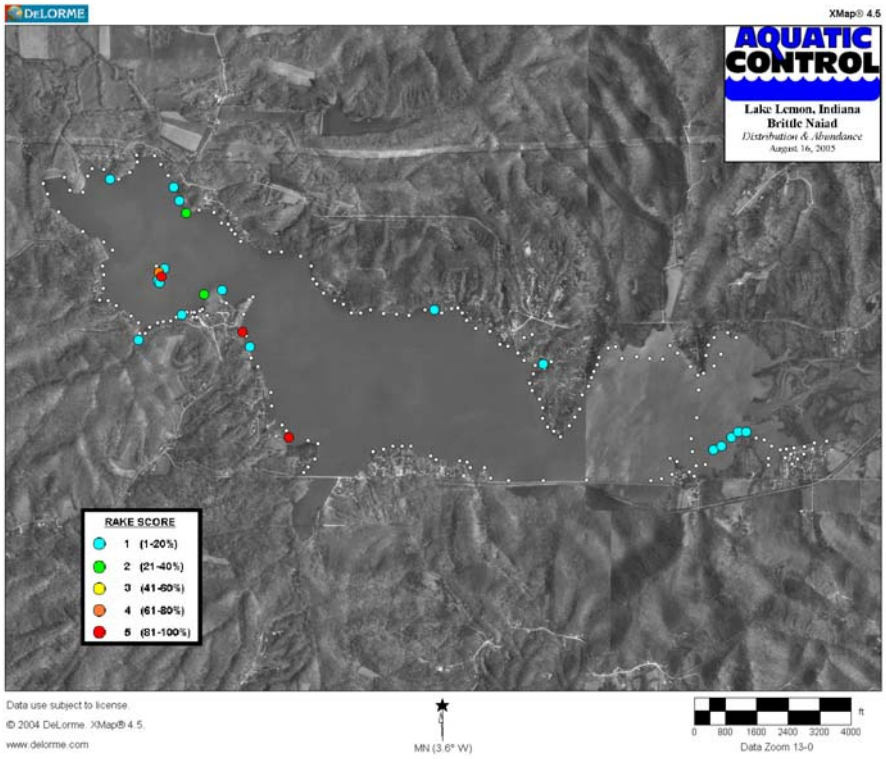

Figure 10. Lake Lemon, brittle naiad distribution and abundance, August 16, 2005.

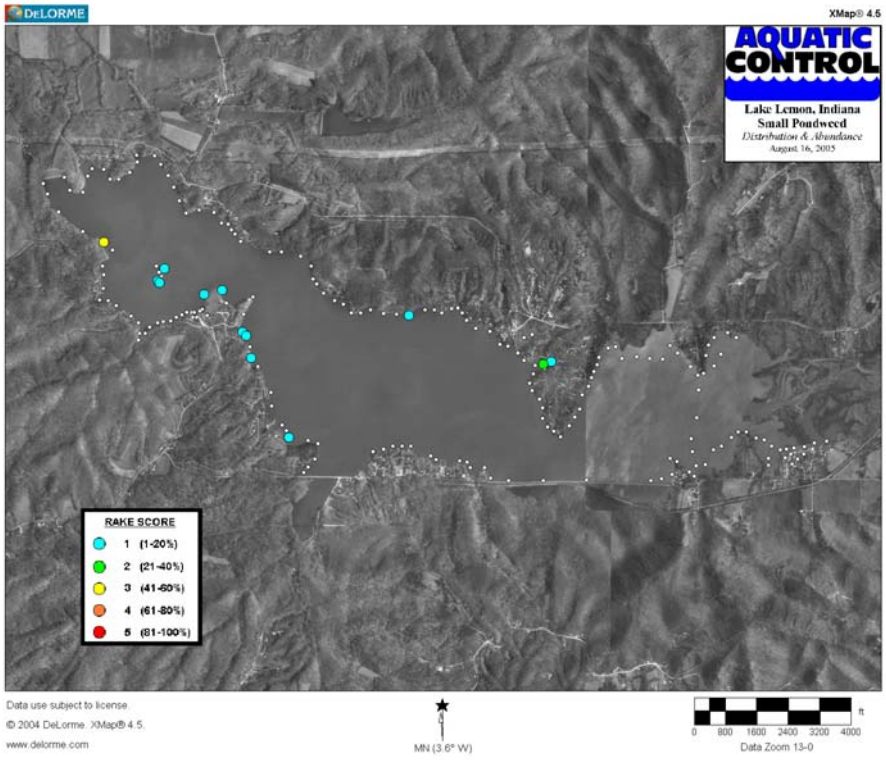

Figure 11. Lake Lemon, small pondweed distribution and abundance, August 16, 2005

Microscopic Algae Sampling

A potential toxin producing blue-green algae, *Cylindrospermopsis raciborskii,* was detected in Lake Lemon in 2004 by Indiana University professor Bill Jones. High levels of this species were again detected in 2005 (personal communication, 2005). These levels were high enough in 2005 that the Bloomington Health Department issued a warning to lake users. Aquatic Control took a surface sample on August 19 in order to have it analyzed for potential control. Clemson University analyzed the samples and challenged the algae with different algaecide formulations. In short, they found that an application of 0.2 mg Cu/L of Algimycin PWF, 0.2 mg Cu/L of Cutrine-Plus, or 5.27 mg peroxide based algaecide/L would be effective controlling *Cylindrospermopsis* and that periodic applications would be required (Rogers et. al., 2005). Lake Lemon was tested for toxins in 2005 and none were detected despite the high levels of *Cylindrospermopsis.* It is unclear what triggers toxin production and release from this species. At this time, LARE will not be funding treatment of planktonic algae.

Aquatic Vegetation Sampling Discussion

Lake Lemon experienced clearer than normal water in the spring of 2005. This condition likely led to an increase in diversity of native vegetation, but also a high abundance and density of exotic vegetation. Typically, there is a higher density and diversity in August surveys when compared to May, but the opposite was true for Lake Lemon. This was likely due to the increased clarity during the May survey (Figure 12). The clear water did not last. A microscopic algae bloom formed in late June and

substantially reduced water clarity. This led to a reduction in the littoral zone and possibly a slight reduction in diversity metrics (Figure 12, 13, 14, & 15). The slight reduction may also be related to the sampling protocol that may not be adequate to detect rare species.

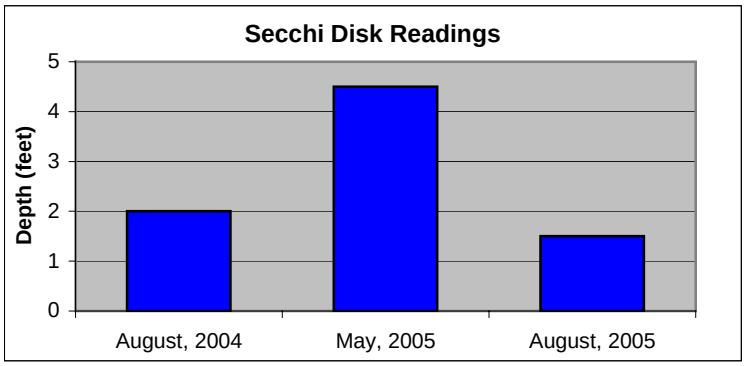

Figure 12. Lake Lemon, comparison of Secchi Disk readings in the last three surveys.

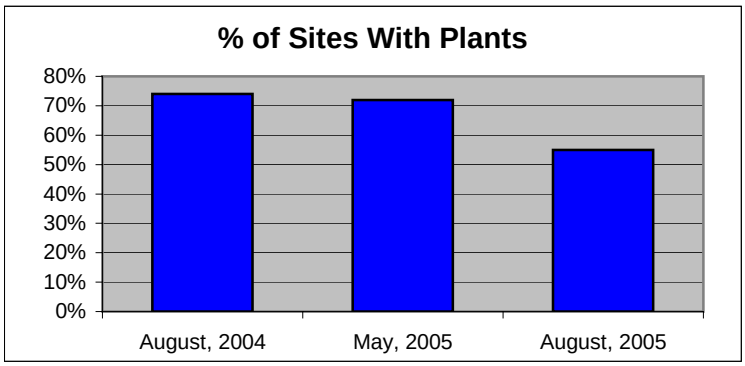

Figure 13. Lake Lemon, comparison of the percentage of sites with plants in the last three surveys.

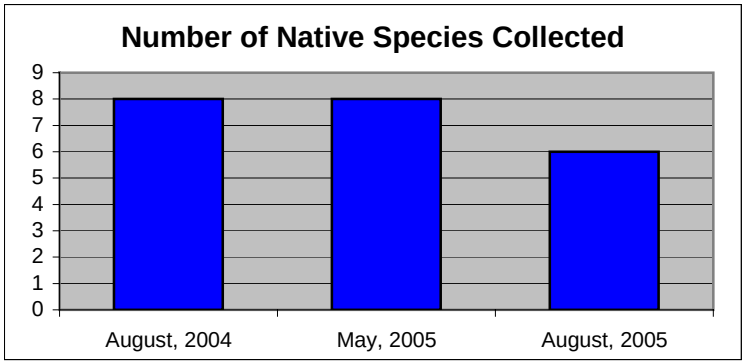

Figure 14. Lake Lemon, comparison of the number of native species collected in the last three surveys.

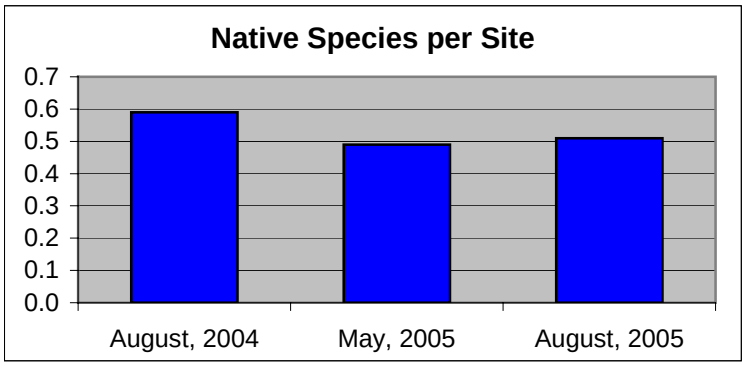

Figure 15. Lake Lemon, comparison of the average number of native species per sample site in the last three surveys.

Based on late May visual observations, it appeared that there was an increase in abundance and density of Eurasian watermilfoil in the upper end of Lake Lemon (there was no Spring, 2004 sampling data to compare). However, when comparing the August 2004 sampling data to the May 2005 data there was a slight decrease in percent occurrence and relative density. This discrepancy was likely due to a decrease in density and abundance in the lower half of Lake Lemon. These metrics significantly decreased in the late summer surveys (Figure 16 & 17). This decrease is likely due to the combination of the aggressive treatment program and the decreased water transparency. Additional milfoil treatments were completed on remaining dense beds following the August survey, so by the end of the season the August Eurasian watermilfoil metrics may have been even lower. It appears that the treatments are helped to achieve the goal of reducing nuisance conditions caused by Eurasian watermilfoil.

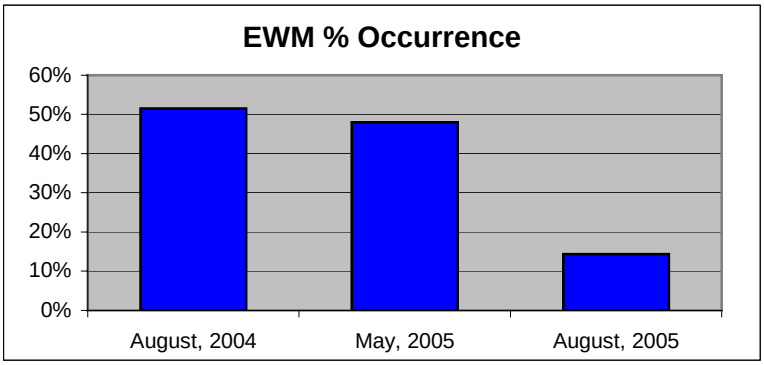

Figure 16. Lake Lemon, comparison of Eurasian watermilfoil percent occurrence in the last three surveys.

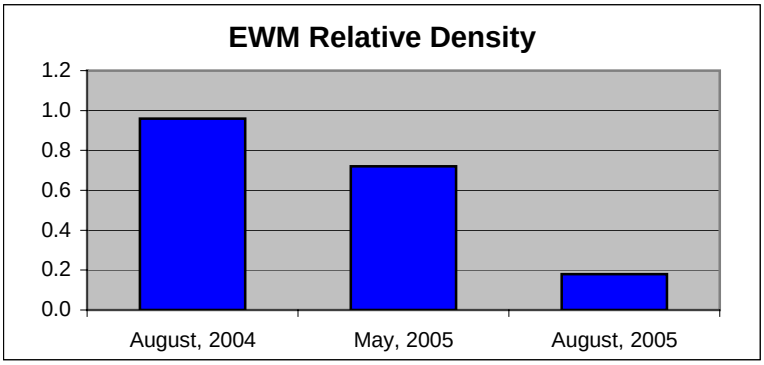

Figure 17. Lake Lemon, comparison of Eurasian watermilfoil relative density in the last three surveys

Curlyleaf pondweed reached nuisance levels in several areas in the spring of 2005. This species has historically not been a problem in Lake Lemon, but in the May survey it was the second most frequently occurring species and also ranked second in relative density. It will be important to monitor this species and aggressively control it if it continues to spread. Figure 18 & 19 illustrate percent occurrence and relative density of this species in the last three surveys. Curlyleaf pondweed typically senesces by the time the late summer surveys are completed. It will be more valuable to compare the 2006 May survey to this past May survey in order to see any trends or changes in the curlyleaf population.

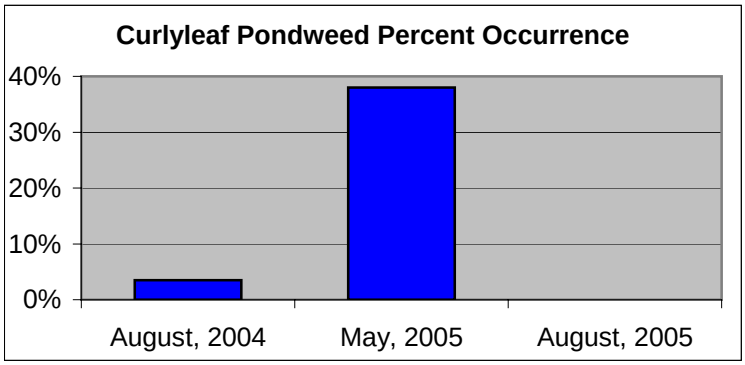

Figure 18. Lake Lemon, comparison of curlyleaf pondweed percent occurrence in the last three surveys.

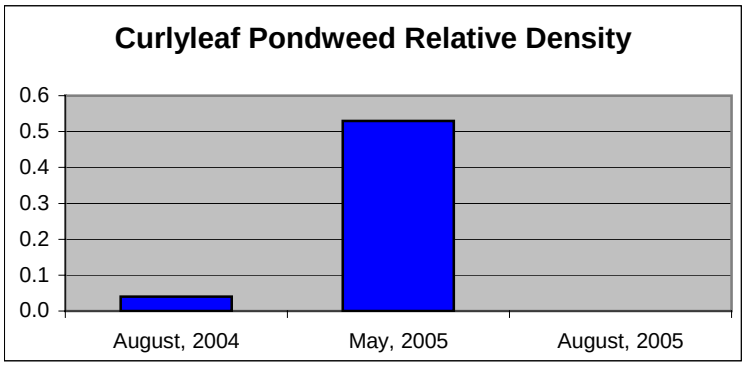

Figure 19. Lake Lemon, comparison of curlyleaf pondweed relative density in the last three surveys.

2005 VEGETATION CONTROLS

The action plan called for selective treatment of Eurasian watermilfoil with Renovate herbicide and treatment of native vegetation to keep open boating lanes. The first treatment was completed on May 18, one week after the May survey. A total of 105 acres of milfoil was treated with Renovate herbicide. Along with the renovate treatment, 18.5 acres of curlyleaf pondweed and coontail was treated with Aquathol K herbicide (Table 4 & Figure 20).

Table 4. Summary of the 2005 Aquatic Vegetation Treatments on Lake Lemon (number listed is acres treated).

Date	New EWM	Redo EWM	New Submersed	Redo Submersed	Lotus/Spatterdock
5/18/2005	105.0		18.5		
6/8/2005	6.0	2.5	10.0	8.0	
6/16/2005			0.75	3.0	0.5
6/30/2005				3.0	0.5
8/4/2005	6.0	1.0	1.3		9.0
8/25/2005	8.0	0.5			
9/15/2005	1.5				

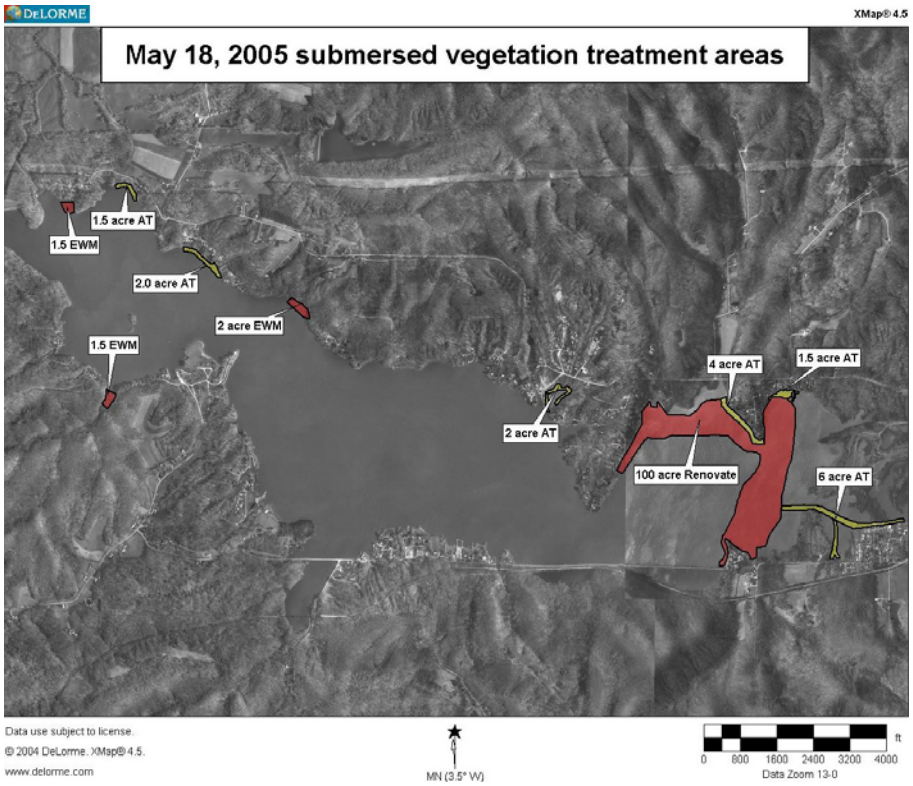

Figure 20. Lake Lemon, Eurasian watermilfoil and submersed vegetation treatment, May 18, 2005.

Within 24 hours of this treatment a 4-inch rain event occurred which brought the Lake up several feet. This rain did not effect the renovate treatment, but some areas which were treated with Aquathol had to be re-treated. On June 8, a total of 8.0 acres of curlyleaf pondweed and coontail were retreated and 2.5 acres of milfoil required retreatment. Six new acres of milfoil were also treated at this time along with 10.0 new acres of curlyleaf pondweed and coontail (Figure 21).

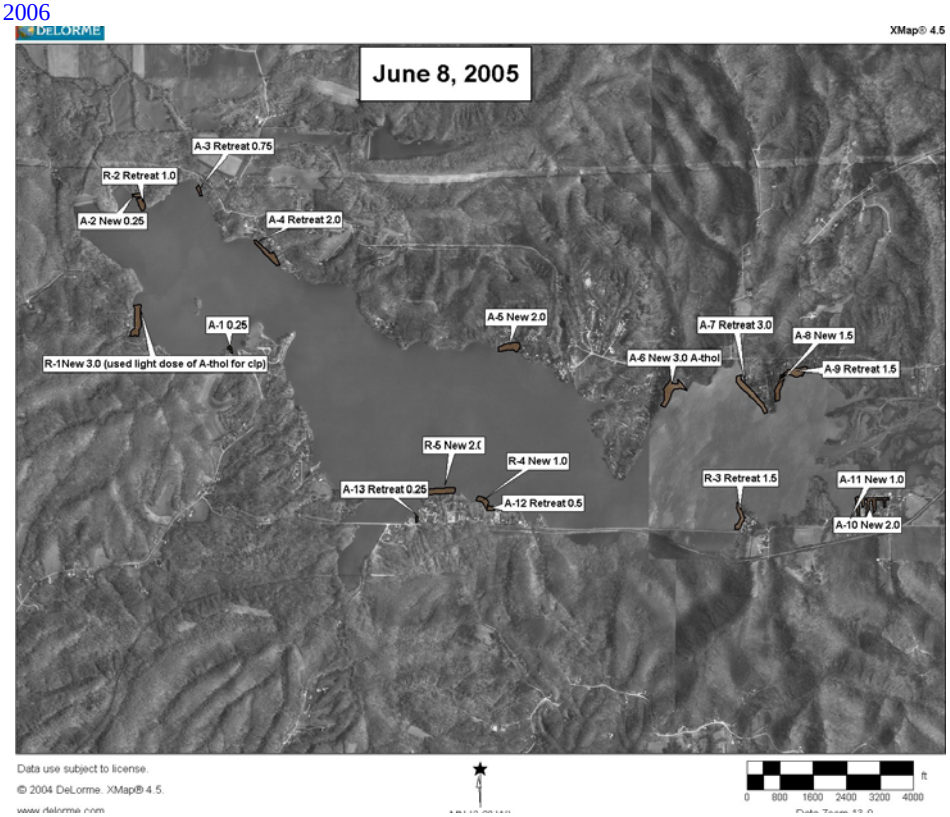

Figure 21. Lake Lemon, Eurasian watermilfoil and submersed vegetation treatment, June 8, 2005 (R-# stands for Renovate or milfoil treatment and A-# stands for Aquathol or submersed vegetation treatment).

An additional 3.0 acres of submersed vegetation was retreated on June 16. This treatment targeted dense shallow water coontail beds. Along with the 3 acres, 0.75 acres of new nuisance submersed vegetation and 0.5 acres of spatterdock were also treated in order to open up a boating lane in the upper end of the lake (Figure 22).

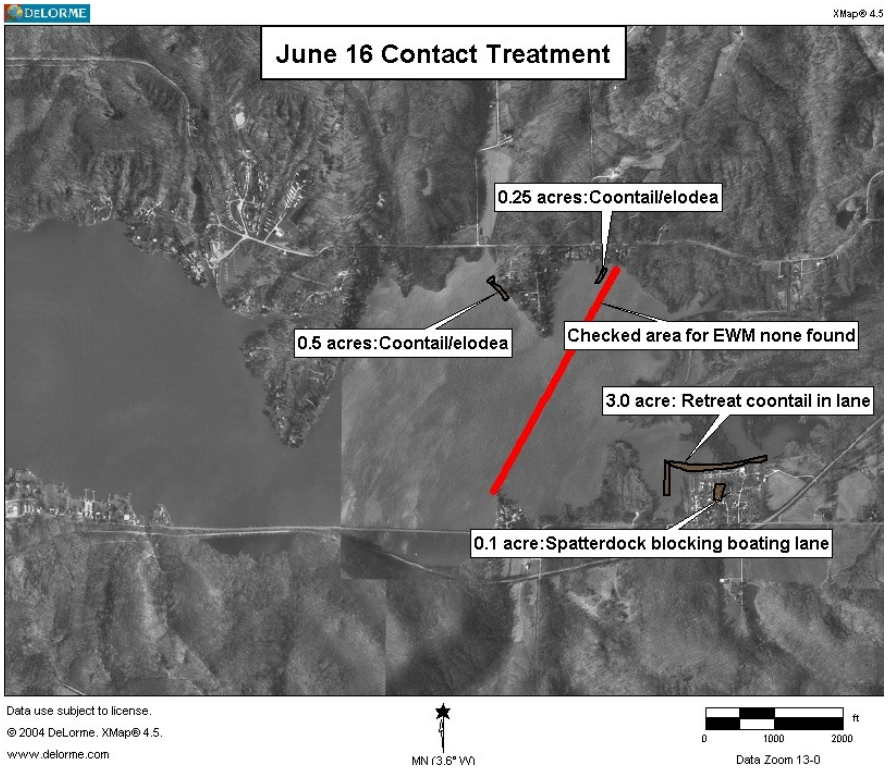

Figure 22. Lake Lemon, submersed vegetation and spatterdock treatment areas, June 16, 2005.

On June 30, 3.0 acres of submersed vegetation was retreated. These were predominantly shallow areas that had dense coontail beds blocking boat access. A small patch of lotus was also treated in order to open up boat access (Figure 23).

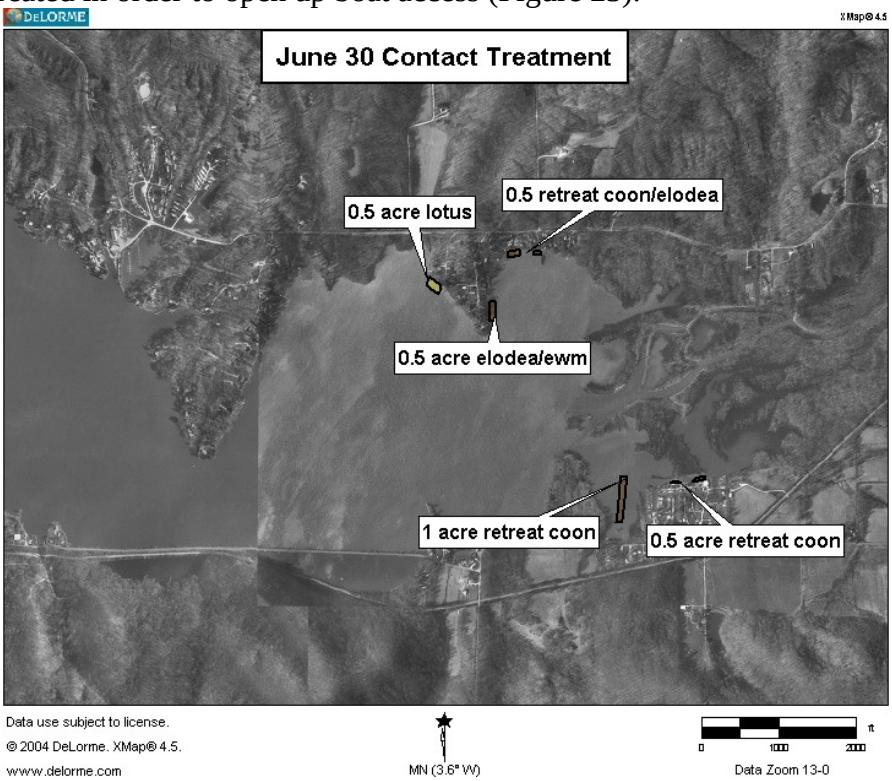

Figure 23. Lake Lemon submersed vegetation and Lotus treatment, June 30, 2005.

No treatments were completed in the month of July. On August 4, 6.0 acres of Eurasian watermilfoil was treated in three different areas and 1 acre was retreated near the upper end of the lake (Figure 24). A small area of coontail was also treated at this time. Lotus and spatterdock were treated with glyphosate herbicide. Scattered beds of lotus were treated outside of the maintenance lines and in order to keep boat access open into the Chitwood Addition (Figure 25).

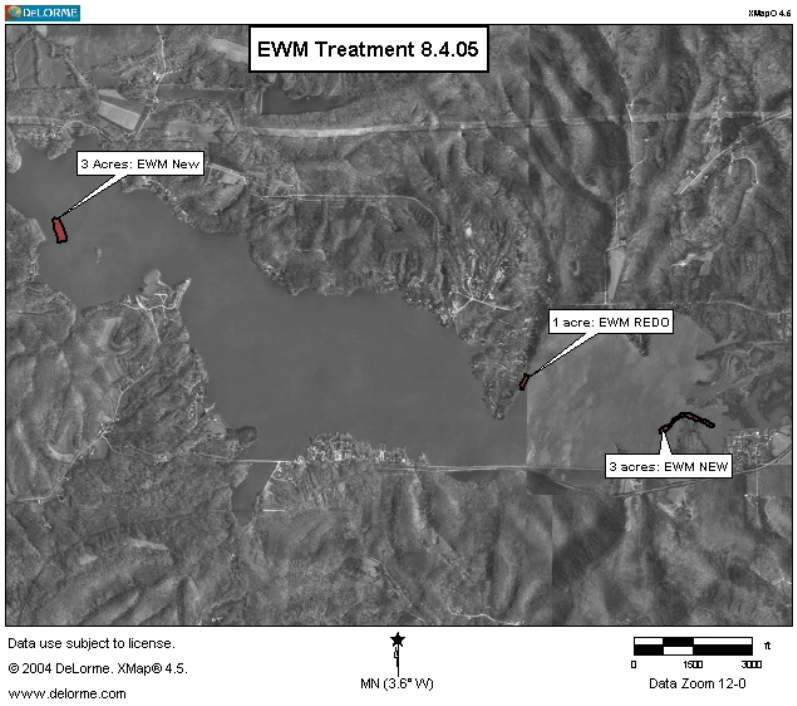

Figure 24. Lake Lemon, Eurasian watermilfoil treatment areas, August 4, 2005.

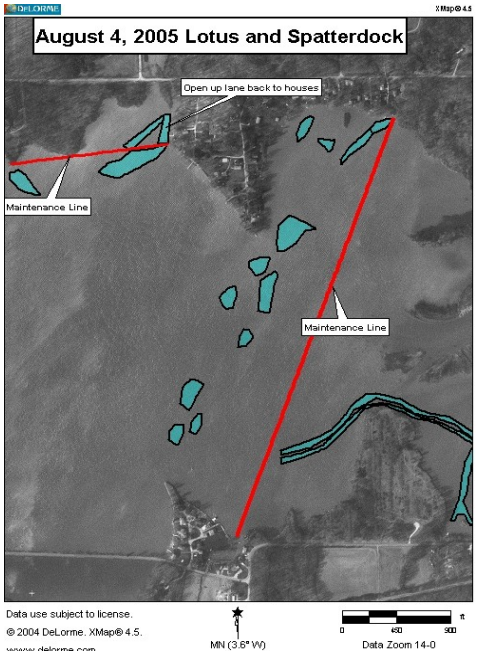

Figure 25. Lake Lemon, lotus and spatterdock treatment areas, August 4, 2005.

A total of 8.0 acres of Eurasian watermilfoil was treated with Renovate herbicide on August 25. Three different areas received the majority of the treatments. A small 0.5-acre area in icebox cove was retreated at this time (Figure 26).

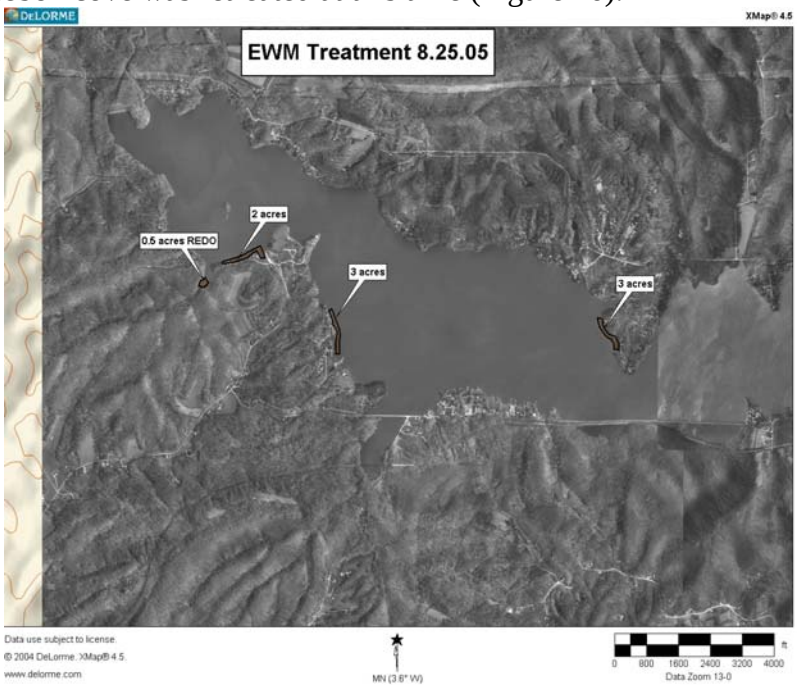

Figure 26. Lake Lemon, Eurasian watermfilfoil treatment areas, August 25, 2005.

The last treatment of Lake Lemon was completed on September 15. A total of 1.5 acres of Eurasian watermilfoil was treated with Renovate herbicide. This treatment was completed in an area where contact herbicides were applied earlier in the season (Figure 27).

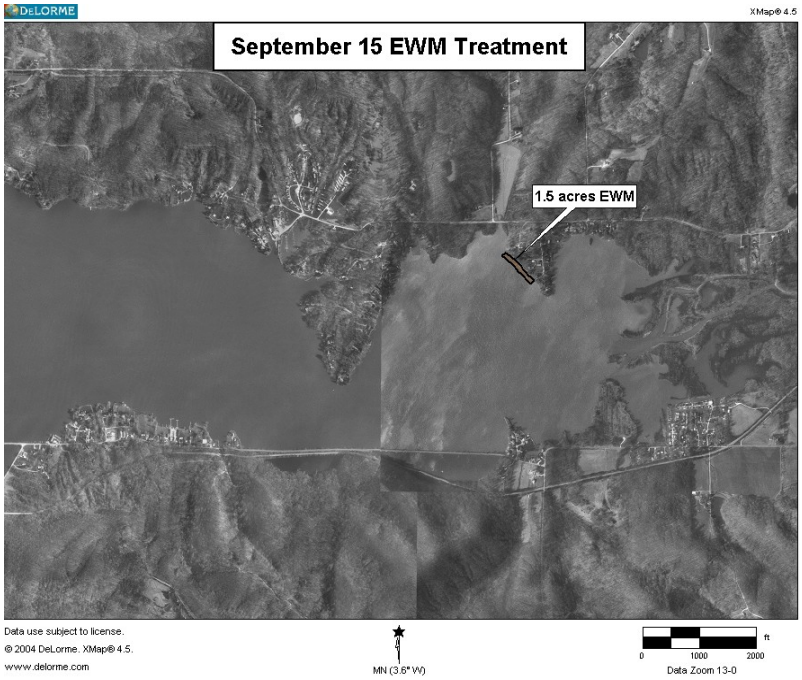

Figure 27. Lake Lemon, Eurasian watermifoil treatment area, September 15, 2005.

PUBLIC INVOLVEMENT

A public meeting was held on November 16, 2005 at the Unionville Retirement Center. Approximately 15 individuals attended the meeting. All of those in attendance lived within the LLCD and large majority were satisfied with the vegetation control. One individual's main concern was the increase in the amount of rooted floating vegetation and coontail in shallow water areas. It was explained that control of rooted floating vegetation, primarily American lotus, took place in order to maintain maintenance lines and to keep open boating lanes. It was also explained that in most cases coontail is a beneficial native species and that it would only be controlled in order to open up boating lanes. Another topic of concern was the sedimentation in the upper end of the lake. The Conservancy is addressing this concern by beginning a dredging project. Dredging areas are yet to be determined, but when these areas are mapped out this information will be presented in the next AVMP update. It was brought to the lake users attention that a fish survey should be completed in the near future (the last survey was completed by Aquatic Control Inc. in 2000). At this time, there is not funding available to complete such a survey (IDNR will not complete fish surveys on Lake Lemon due to the fee collection at the ramp).

ACTION PLAN AND BUDGET UPDATE

The 2005 treatments effectively controlled Eurasian watermilfoil in the treated areas as reflected by the plant surveys. Following the August survey, several remaining small areas of milfoil were treated. It is difficult to estimate how much milfoil will return next season, but it is very likely that some will require treatment. Due to this uncertainty, it is recommended that the conservancy continue with the budget that was established in the original plan (Table 5). Two surveys should also be completed in 2006 to monitor the plant community. A tier I and II survey should be completed in May and a tier II survey in August. It is recommended that the Conservancy request $35,200 from the LARE program for treatment and the plan update.

Table 5. Copy of budget from original plan.

	2005	2006	2007	2008
Triclopyr Application Cost (Eurasian watermilfoil only)	$50,000	$30,000	$20,000	$10,000
Herbicide & Application Cost (spatterdock, lotus, and pondweeds)	$6,000	$10,000	$12,000	$15,000
Vegetation Sampling & Plan Update	$5,200	$5,200	$5,200	$5,200
Total:	**$61,200**	**$45,200**	**$37,200**	**$30,200**

Appendix Update
2005 Sampling Data-May Tier II Survey

Lake	Date	Latitude	Longitude	Site	Depth	RAKE	MYSP2	POCR3	CEDE4	CH?AR	POPE6	POPU7	ELCA7	POZO	ZAPA	UNID	DRAP?	SpeNum	NatSpeNum
Lemon	5/12/05	39.26312	-86.4132	1	6.0	1	1					1			1			3	2
Lemon	5/12/05	39.26415	-86.4131	2	4.0													0	0
Lemon	5/12/05	39.26444	-86.4114	3	2.0	1								1				1	1
Lemon	5/12/05	39.26356	-86.4111	4	5.0	1									1			1	1
Lemon	5/12/05	39.26399	-86.4087	5	4.0													0	0
Lemon	5/12/05	39.26275	-86.4095	6	7.0													0	0
Lemon	5/12/05	39.26152	-86.4096	7	3.0	1									1			1	1
Lemon	5/12/05	39.26124	-86.4093	8	4.0													0	0
Lemon	5/12/05	39.26049	-86.409	9	6.0			1										1	0
Lemon	5/12/05	39.25971	-86.4088	10	5.0	2	2							1				2	1
Lemon	5/12/05	39.25912	-86.4082	11	3.0	1									1			1	1
Lemon	5/12/05	39.25727	-86.4071	12	4.0													0	0
Lemon	5/12/05	39.25635	-86.407	13	3.0	1									1			1	1
Lemon	5/12/05	39.255	-86.4061	14	3.0	1	1	1		1				1				4	2
Lemon	5/12/05	39.2546	-86.4057	15	2.0	3	1	3						1				3	1
Lemon	5/12/05	39.25413	-86.4054	16	2.0	1	1							1				2	1
Lemon	5/12/05	39.25392	-86.4037	17	8.0													0	0
Lemon	5/12/05	39.25369	-86.4028	18	4.0	3	3											1	0
Lemon	5/12/05	39.25264	-86.4031	19	5.0	1	1	1										2	0
Lemon	5/12/05	39.25208	-86.4037	20	3.0	1	1		1			1						3	2
Lemon	5/12/05	39.25169	-86.4041	21	4.0	1	1	1										2	0
Lemon	5/12/05	39.25313	-86.3979	22	4.0													0	0
Lemon	5/12/05	39.25333	-86.3969	23	3.0	1		1										1	0
Lemon	5/12/05	39.25355	-86.3961	24	3.0													0	0
Lemon	5/12/05	39.25355	-86.3953	25	4.0	1	1	1										2	0
Lemon	5/12/05	39.25355	-86.3945	26	4.0	4		4										1	0
Lemon	5/12/05	39.25284	-86.3927	27	2.0													0	0
Lemon	5/12/05	39.25257	-86.3922	28	3.0	1	1	1		1								3	1
Lemon	5/12/05	39.25252	-86.3901	29	4.0	1	1											1	0
Lemon	5/12/05	39.25241	-86.3894	30	3.0	1	1											1	0
Lemon	5/12/05	39.25201	-86.3891	31	4.0													0	0
Lemon	5/12/05	39.25204	-86.3879	32	6.0													0	0
Lemon	5/12/05	39.25128	-86.3873	33	9.0													0	0
Lemon	5/12/05	39.25113	-86.3857	34	8.0	1	1											1	0
Lemon	5/12/05	39.25113	-86.3826	35	8.0													0	0
Lemon	5/12/05	39.25117	-86.3787	36	7.0													0	0
Lemon	5/12/05	39.25114	-86.3729	37	5.0	2	2											1	0
Lemon	5/12/05	39.25123	-86.3719	38	7.0			1										1	0
Lemon	5/12/05	39.25156	-86.371	39	4.0	1												0	0
Lemon	5/12/05	39.25267	-86.3711	40	6.0	1	1	1	1				1					4	2
Lemon	5/12/05	39.25245	-86.3706	41	4.0	1	1	2										2	0
Lemon	5/12/05	39.25171	-86.3694	42	3.0	5	2	1	2				1					4	2
Lemon	5/12/05	39.25141	-86.369	43	2.0	5	1	5	5				4					4	2
Lemon	5/12/05	39.25217	-86.3688	44	3.0	5	5		5									2	1
Lemon	5/12/05	39.25225	-86.368	45	2.0	5			5									1	1
Lemon	5/12/05	39.2533	-86.3673	46	2.0	1			1									1	1
Lemon	5/12/05	39.25355	-86.3665	47	3.0	2	1		2				1	1				4	3
Lemon	5/12/05	39.25416	-86.3656	48	3.0	1	1											1	0
Lemon	5/12/05	39.25451	-86.365	49	4.0	4	1	1			1		4					4	2
Lemon	5/12/05	39.25453	-86.3643	50	1.0	2		1	1		1		2					4	3
Lemon	5/12/05	39.25409	-86.3634	51	3.0	2	1	1	2									3	1
Lemon	5/12/05	39.25397	-86.3627	52	3.0	1		1	1									2	1
Lemon	5/12/05	39.25354	-86.362	53	4.0	5		5	2									2	1
Lemon	5/12/05	39.25327	-86.3613	54	3.0	2		1	2						1			3	2
Lemon	5/12/05	39.25334	-86.3607	55	3.0	2		1	2				1					3	2
Lemon	5/12/05	39.25271	-86.3608	56	3.0	2		1	2									2	1
Lemon	5/12/05	39.25298	-86.3603	57	3.0	1		1	1									2	1
Lemon	5/12/05	39.25296	-86.3592	58	2.0	1			1									1	1
Lemon	5/12/05	39.25265	-86.3597	59	2.0	1		1	1				1					3	2
Lemon	5/12/05	39.25228	-86.3602	60	3.0	2			2									1	1
Lemon	5/12/05	39.25339	-86.36	61	3.0	2		1	1				1					3	2
Lemon	5/12/05	39.25348	-86.3591	62	3.0	2		1	1			1						3	2
Lemon	5/12/05	39.25375	-86.3582	63	4.0	5		1	5									2	1
Lemon	5/12/05	39.25388	-86.3571	64	2.0	3		1	3							1		3	2
Lemon	5/12/05	39.25267	-86.3623	65	4.0	5		2	5									2	1
Lemon	5/12/05	39.25222	-86.3623	66	3.0	2		1	2									2	1
Lemon	5/12/05	39.25315	-86.3692	67	3.0	1	1		1									2	1
Lemon	5/12/05	39.25408	-86.3693	68	3.0	1	1	1	1									3	1
Lemon	5/12/05	39.25554	-86.3688	69	3.0	1	1	1										2	0
Lemon	5/12/05	39.25746	-86.3686	70	3.0	5	5											1	0
Lemon	5/12/05	39.25914	-86.3672	71	3.0	5	5	2										2	0
Lemon	5/12/05	39.25997	-86.3666	72	3.0	5	2	1	5				1					4	2
Lemon	5/12/05	39.26112	-86.3652	73	2.0	5	3	1	4				2					4	2
Lemon	5/12/05	39.26149	-86.366	74	2.0	2	2		1				1					3	2
Lemon	5/12/05	39.26113	-86.3672	75	3.0	2	1		2									2	1
Lemon	5/12/05	39.26059	-86.3677	76	3.0	2	1		2									2	1
Lemon	5/12/05	39.25986	-86.3679	77	3.0	1	1		1									2	1
Lemon	5/12/05	39.25862	-86.3682	78	2.0	1	1	1										2	0
Lemon	5/12/05	39.25849	-86.3687	79	3.0	1	1											1	0
Lemon	5/12/05	39.2591	-86.3693	80	4.0	4	2	2										2	0
Lemon	5/12/05	39.26006	-86.3705	81	3.0	4	2	2	1									3	1
Lemon	5/12/05	39.26058	-86.3712	82	2.0	5	2	5	1				1					4	2
Lemon	5/12/05	39.25963	-86.3718	83	3.0	3	2	1										2	0
Lemon	5/12/05	39.25965	-86.373	84	5.0	4	4	1										2	0
Lemon	5/12/05	39.25977	-86.3742	85	5.0	3	1	3										2	0
Lemon	5/12/05	39.25967	-86.3755	86	3.0	2	2		1									2	1
Lemon	5/12/05	39.26049	-86.3761	87	3.0	2	2		1									2	1
Lemon	5/12/05	39.26041	-86.3767	88	3.0	4	4											1	0
Lemon	5/12/05	39.25976	-86.3775	89	5.0	2	2											1	0
Lemon	5/12/05	39.25924	-86.3777	90	6.0	1	1	1										2	0
Lemon	5/12/05	39.25874	-86.378	91	6.0	1	1											1	0
Lemon	5/12/05	39.25832	-86.3782	92	6.0	1	1	1										2	0
Lemon	5/12/05	39.25772	-86.3785	93	5.0													0	0
Lemon	5/12/05	39.25712	-86.379	94	6.0	3	3											1	0
Lemon	5/12/05	39.25614	-86.3793	95	5.0	1	1											1	0
Lemon	5/12/05	39.25556	-86.3797	96	7.0													0	0
Lemon	5/12/05	39.25495	-86.3802	97	9.0													0	0
Lemon	5/12/05	39.2542	-86.381	98	5.0													0	0
Lemon	5/12/05	39.25456	-86.3816	99	6.0	1		1										1	0
Lemon	5/12/05	39.25486	-86.3822	100	5.0													0	0
Lemon	5/12/05	39.25548	-86.3826	101	7.0	1	1											1	0
Lemon	5/12/05	39.25623	-86.3826	102	5.0	1	1	1										2	0
Lemon	5/12/05	39.25682	-86.3829	103	6.0	2		2										1	0
Lemon	5/12/05	39.25742	-86.3836	104	5.0													0	0
Lemon	5/12/05	39.25794	-86.3838	105	6.0													0	0
Lemon	5/12/05	39.25856	-86.3834	106	5.0													0	0
Lemon	5/12/05	39.25895	-86.3825	107	3.0	1	1	1										2	0
Lemon	5/12/05	39.25943	-86.3819	108	4.0	1		1						1				2	1
Lemon	5/12/05	39.25929	-86.3825	109	3.0	1	1	1						1				3	1
Lemon	5/12/05	39.25921	-86.3833	110	5.0	1	1											1	0
Lemon	5/12/05	39.25954	-86.3843	111	6.0													0	0
Lemon	5/12/05	39.26006	-86.3849	112	8.0													0	0
Lemon	5/12/05	39.26133	-86.3835	113	4.0	5	1	1	5									3	1
Lemon	5/12/05	39.26113	-86.3843	114	6.0	2	1		2									2	1
Lemon	5/12/05	39.2605	-86.3858	115	6.0	1		1										1	0
Lemon	5/12/05	39.26066	-86.3865	116	6.0	1		1										1	0
Lemon	5/12/05	39.26156	-86.3874	117	5.0	1	1	1										2	0
Lemon	5/12/05	39.26179	-86.3886	118	2.0	1		1										1	0
Lemon	5/12/05	39.26232	-86.3895	119	3.0	1	1											1	0
Lemon	5/12/05	39.26287	-86.3899	120	3.0	1		1			1							2	1
Lemon	5/12/05	39.2632	-86.3903	121	4.0	1		1										1	0
Lemon	5/12/05	39.26315	-86.3908	122	4.0	1	1	1										2	0
Lemon	5/12/05	39.26285	-86.3917	123	4.0	5	1	5			1	1						4	2
Lemon	5/12/05	39.26307	-86.3924	124	3.0	1	1	1			1							3	1
Lemon	5/12/05	39.26306	-86.3932	125	5.0	1	1							1				2	1
Lemon	5/12/05	39.26268	-86.3946	126	3.0	1								1	1			2	2
Lemon	5/12/05	39.26275	-86.3958	127	5.0	1		1										1	0

Species Codes	
BIBE	Bur marigold
CEDE4	Coontail
CH?AR	Chara
ELCA7	Elodea
LEMN	Duckweeds
MYHE	Broadleaf watermilfoil
MYSI	Northern watermilfoil
MYSP2	Eurasian watermilfoil
MYVE	Whorled watermilfoil
NAFL	Slender naiad
NAGU	Southern waternymph
NAMA	Spiny naiad
NAMI	Brittle waternymph
NELU	American lotus
NI?TE	Nitella
NOAQVG	No aquatic vegetation
UNID	Unidentified
NYTU	White water lily
POAM	Large-leaf pondweed
POCR3	Curly-leaf pondweed
POFO3	Leafy pondweed
POGR8	Variable pondweed
POIL	Illinois pondweed
PONO2	American pondweed
POPE6	Sago pondweed
POPR5	White-stemmed pondweed
POPU7	Small pondweed
PORI2	Richardson's pondweed
POZO	Flat-stemmed pondweed
UTMA	Common bladderwort
VAAM3	Wild celery, eel grass
WO?LF	Watermeal
ZAPA	Horned pondweed
ZODU	Water stargrass
Count	34

Lake	Date	Latitude	Longitude	Site	Depth	RAKE	MYSP2	POCR3	CEDE4	CH?AR	POPE6	POPU7	ELCA7	POZO	ZAPA	UNID	DRAP?	SpeNum	NatSpeNum	Species Codes	
Lemon	5/12/05	39.2628	-86.3969	128	3.0													0	0	BIBE	Bur marigold
Lemon	5/12/05	39.26308	-86.3981	129	4.0	3	3											1	0	CEDE4	Coontail
Lemon	5/12/05	39.26284	-86.399	130	8.0	1	1											1	0	CH?AR	Chara
Lemon	5/12/05	39.26283	-86.3998	131	6.0													0	0	ELCA7	Elodea
Lemon	5/12/05	39.26345	-86.4005	132	9.0													0	0	LEMN	Duckweeds
Lemon	5/12/05	39.26373	-86.4013	133	4.0													0	0	MYHE	Broadleaf watermilfoil
Lemon	5/12/05	39.26422	-86.4023	134	7.0													0	0	MYSI	Northern watermilfoil
Lemon	5/12/05	39.26487	-86.4029	135	3.0	1	1											1	0	MYSP2	Eurasian watermilfoil
Lemon	5/12/05	39.26524	-86.4033	136	6.0													0	0	MYVE	Whorled watermilfoil
Lemon	5/12/05	39.26611	-86.4034	137	3.0	5	4	1										2	0	NAFL	Slender naiad
Lemon	5/12/05	39.26683	-86.4044	138	6.0	1	1											1	0	NAGU	Southern waternymph
Lemon	5/12/05	39.26713	-86.4061	139	9.0	1	1	1										2	0	NAMA	Spiny naiad
Lemon	5/12/05	39.2671	-86.4072	140	4.0													0	0	NAMI	Brittle waternymph
Lemon	5/12/05	39.26785	-86.4098	141	5.0													0	0	NELU	American lotus
Lemon	5/12/05	39.26837	-86.4103	142	3.0	1	1											1	0	NI?TE	Nitella
Lemon	5/12/05	39.26866	-86.4106	143	5.0	1	1											1	0	NOAQVG	No aquatic vegetation
Lemon	5/12/05	39.26906	-86.4109	144	5.0	1	1	1										2	0	UNID	Unidentified
Lemon	5/12/05	39.26913	-86.4115	145	6.0													0	0	NYTU	White water lily
Lemon	5/12/05	39.26988	-86.4122	146	3.0	1		1										1	0	POAM	Large-leaf pondweed
Lemon	5/12/05	39.27007	-86.4135	147	7.0	1		1										1	0	POCR3	Curly-leaf pondweed
Lemon	5/12/05	39.26985	-86.4147	148	3.0													0	0	POFO3	Leafy pondweed
Lemon	5/12/05	39.27068	-86.4153	149	3.0	1	1	1							1			3	1	POGR8	Variable pondweed
Lemon	5/12/05	39.27165	-86.4158	150	5.0	1	1	1							1			3	1	POIL	Illinois pondweed
Lemon	5/12/05	39.27247	-86.4163	151	6.0	1	1											1	0	PONO2	American pondweed
Lemon	5/12/05	39.27326	-86.417	152	7.0	1	1	1										2	0	POPE6	Sago pondweed
Lemon	5/12/05	39.27384	-86.4175	153	6.0	1	1											1	0	POPR5	White-stemmed pondweed
Lemon	5/12/05	39.27389	-86.4191	154	6.0	1	1	1										2	0	POPU7	Small pondweed
Lemon	5/12/05	39.27341	-86.4191	155	7.0													0	0	PORI2	Richardson's pondweed
Lemon	5/12/05	39.27269	-86.4197	156	8.0													0	0	POZO	Flat-stemmed pondweed
Lemon	5/12/05	39.27222	-86.4208	157	6.0													0	0	UTMA	Common bladderwort
Lemon	5/12/05	39.27221	-86.4215	158	2.0	2	2	1										2	0	VAAM3	Wild celery, eel grass
Lemon	5/12/05	39.27288	-86.4221	159	5.0	1	1	1										2	0	WO?LF	Watermeal
Lemon	5/12/05	39.27295	-86.4232	160	5.0													0	0	ZAPA	Horned pondweed
Lemon	5/12/05	39.27243	-86.4235	161	4.0	1	1	1										2	0	ZODU	Water stargrass
Lemon	5/12/05	39.27131	-86.424	162	5.0	4	4											1	0		
Lemon	5/12/05	39.27143	-86.4252	163	6.0	1	1					1						2	1	Count	34
Lemon	5/12/05	39.27234	-86.4256	164	9.0													0	0		
Lemon	5/12/05	39.27193	-86.4275	165	8.0													0	0		
Lemon	5/12/05	39.27117	-86.4271	166	2.0	1	1											1	0		
Lemon	5/12/05	39.26991	-86.4261	167	11.0													0	0		
Lemon	5/12/05	39.26854	-86.424	168	7.0													0	0		
Lemon	5/12/05	39.2678	-86.4221	169	3.0	2	2								1			2	1		
Lemon	5/12/05	39.26726	-86.4213	170	5.0	3	3											1	0		
Lemon	5/12/05	39.26611	-86.4222	171	7.0													0	0		
Lemon	5/12/05	39.26554	-86.4221	172	6.0	1												0	0		
Lemon	5/12/05	39.26459	-86.4221	173	5.0	1	1											1	0		
Lemon	5/12/05	39.26377	-86.4224	174	3.0	1	1	1										2	0		
Lemon	5/12/05	39.26373	-86.4217	175	7.0		1											1	0		
Lemon	5/12/05	39.26337	-86.4209	176	7.0													0	0		
Lemon	5/12/05	39.26265	-86.4196	177	10.0													0	0		
Lemon	5/12/05	39.26215	-86.4189	178	9.0													0	0		
Lemon	5/12/05	39.26141	-86.4188	179	4.0													0	0		
Lemon	5/12/05	39.26094	-86.419	180	2.0	1	1								1			2	1		
Lemon	5/12/05	39.26142	-86.4184	181	3.0	1	1											1	0		
Lemon	5/12/05	39.26186	-86.418	182	5.0													0	0		
Lemon	5/12/05	39.2651	-86.4172	183	3.0	1									1			1	1		
Lemon	5/12/05	39.26571	-86.4172	184	3.0	1				1					1			2	2		
Lemon	5/12/05	39.26612	-86.4173	185	3.0	1									1			1	1		
Lemon	5/12/05	39.26594	-86.4166	186	3.0	1									1			1	1		
Lemon	5/12/05	39.2654	-86.4169	187	2.0	1				1					1		1	2	2		
Lemon	5/12/05	39.26497	-86.4171	188	3.0	1									1			1	1		
Lemon	5/12/05	39.26217	-86.4172	189	7.0													0	0		
Lemon	5/12/05	39.26227	-86.4167	190	6.0													0	0		
Lemon	5/12/05	39.2623	-86.4161	191	2.0	1		1										1	0		
Lemon	5/12/05	39.26256	-86.4156	192	3.0	1									1			1	1		
Lemon	5/12/05	39.2627	-86.4151	193	3.0	1									1			1	1		
Lemon	5/12/05	39.26291	-86.4146	194	4.0	1									1			1	1		
Lemon	5/12/05	39.26288	-86.4142	195	2.0	1	1	1							1			3	1		
Lemon	5/12/05	39.26257	-86.414	196	5.0	1	1											1	0		
Lemon	5/12/05	39.26254	-86.4137	197	5.0	1	1											1	0		
Lemon	5/12/05	39.2629	-86.414	198	5.0													0	0		
Lemon	5/12/05	39.26299	-86.4135	199	5.0													0	0		
Lemon	5/12/05	39.2627	-86.4128	200	3.0													0	0		

AQUATIC CONTROL

August Tier II Survey

Lake	Date	Latitude	Longitude	Site	Depth	RAKE	MYSP2	CEDE4	NAMI	POPE6	POPU7	ELCA7	POZO	SpeNum	NatSpeNum
Lake Lemon	8/16/05	39.26312	-86.4132	1	5.0									0	0
Lake Lemon	8/16/05	39.26415	-86.4131	2	3.0	2			2		1			2	2
Lake Lemon	8/16/05	39.26444	-86.4114	3	1.0	1			1	1	1			3	3
Lake Lemon	8/16/05	39.26356	-86.4111	4	3.0									0	0
Lake Lemon	8/16/05	39.26399	-86.4087	5	5.0									0	0
Lake Lemon	8/16/05	39.26275	-86.4095	6	7.0									0	0
Lake Lemon	8/16/05	39.26152	-86.4096	7	3.0	5			5		1			2	2
Lake Lemon	8/16/05	39.26124	-86.4093	8	5.0	1					1			1	1
Lake Lemon	8/16/05	39.26049	-86.409	9	3.0	1			1					1	1
Lake Lemon	8/16/05	39.25971	-86.4088	10	3.0	2	1	1			1			3	2
Lake Lemon	8/16/05	39.25912	-86.4082	11	2.0									0	0
Lake Lemon	8/16/05	39.25727	-86.4071	12	3.0									0	0
Lake Lemon	8/16/05	39.25635	-86.407	13	4.0	2	2							1	0
Lake Lemon	8/16/05	39.255	-86.4061	14	4.0									0	0
Lake Lemon	8/16/05	39.2546	-86.4057	15	4.0	4	1	4						2	1
Lake Lemon	8/16/05	39.25413	-86.4054	16	2.0	5	1		5		1			3	2
Lake Lemon	8/16/05	39.25392	-86.4037	17	8.0									0	0
Lake Lemon	8/16/05	39.25369	-86.4028	18	6.0									0	0
Lake Lemon	8/16/05	39.25264	-86.4031	19	5.0	1		1						1	1
Lake Lemon	8/16/05	39.25208	-86.4037	20	4.0	1		1						1	1
Lake Lemon	8/16/05	39.25169	-86.4041	21	4.0									0	0
Lake Lemon	8/16/05	39.25313	-86.3979	22	4.0									0	0
Lake Lemon	8/16/05	39.25333	-86.3969	23	4.0									0	0
Lake Lemon	8/16/05	39.25355	-86.3961	24	5.0									0	0
Lake Lemon	8/16/05	39.25355	-86.3953	25	5.0									0	0
Lake Lemon	8/16/05	39.25355	-86.3945	26	6.0									0	0
Lake Lemon	8/16/05	39.25284	-86.3927	27	3.0	1	1							1	0
Lake Lemon	8/16/05	39.25257	-86.3922	28	4.0	1	1							1	0
Lake Lemon	8/16/05	39.25252	-86.3901	29	4.0									0	0
Lake Lemon	8/16/05	39.25241	-86.3894	30	3.0									0	0
Lake Lemon	8/16/05	39.25201	-86.3891	31	5.0									0	0
Lake Lemon	8/16/05	39.25204	-86.3879	32	6.0									0	0
Lake Lemon	8/16/05	39.25128	-86.3873	33	8.0									0	0
Lake Lemon	8/16/05	39.25113	-86.3857	34	8.0									0	0
Lake Lemon	8/16/05	39.25113	-86.3826	35	8.0									0	0
Lake Lemon	8/16/05	39.25117	-86.3787	36	7.0									0	0
Lake Lemon	8/16/05	39.25114	-86.3729	37	5.0	1		1						1	1
Lake Lemon	8/16/05	39.25123	-86.3719	38	7.0									0	0
Lake Lemon	8/16/05	39.25156	-86.371	39	4.0									0	0
Lake Lemon	8/16/05	39.25267	-86.3711	40	3.0									0	0
Lake Lemon	8/16/05	39.25245	-86.3706	41	4.0	2		2						1	1
Lake Lemon	8/16/05	39.25171	-86.3694	42	3.0	3		3						1	1
Lake Lemon	8/16/05	39.25141	-86.369	43	3.0	1		1						1	1
Lake Lemon	8/16/05	39.25217	-86.3688	44	2.0	5		5						1	1
Lake Lemon	8/16/05	39.25225	-86.368	45	2.0	5		5						1	1
Lake Lemon	8/16/05	39.2533	-86.3673	46	2.0	4		4	1					2	2
Lake Lemon	8/16/05	39.25355	-86.3665	47	2.0	5		5	1			1		3	3
Lake Lemon	8/16/05	39.25416	-86.3656	48	3.0	2		2	1					2	2
Lake Lemon	8/16/05	39.25451	-86.365	49	3.0	5		5	1			1		3	3
Lake Lemon	8/16/05	39.25453	-86.3643	50	3.0	2		2	1			1		3	3
Lake Lemon	8/16/05	39.25409	-86.3634	51	3.0	5		5						1	1
Lake Lemon	8/16/05	39.25397	-86.3627	52	3.0	1		1						1	1
Lake Lemon	8/16/05	39.25354	-86.362	53	4.0	1		1						1	1
Lake Lemon	8/16/05	39.25327	-86.3613	54	3.0	3		3						1	1
Lake Lemon	8/16/05	39.25334	-86.3607	55	3.0	2		2						1	1
Lake Lemon	8/16/05	39.25271	-86.3608	56	2.0	1		1						1	1
Lake Lemon	8/16/05	39.25298	-86.3603	57	2.0	1		1						1	1
Lake Lemon	8/16/05	39.25296	-86.3592	58	2.0	1		1						1	1
Lake Lemon	8/16/05	39.25265	-86.3597	59	1.0	1		1						1	1
Lake Lemon	8/16/05	39.25228	-86.3602	60	3.0									0	0
Lake Lemon	8/16/05	39.25339	-86.36	61	3.0	1		1						1	1
Lake Lemon	8/16/05	39.25348	-86.3591	62	4.0	5		5						1	1
Lake Lemon	8/16/05	39.25375	-86.3582	63	3.0	3		3						1	1
Lake Lemon	8/16/05	39.25388	-86.3571	64	2.0	5		5						1	1
Lake Lemon	8/16/05	39.25267	-86.3623	65	3.0	5		5						1	1
Lake Lemon	8/16/05	39.25222	-86.3623	66	3.0	5		5						1	1
Lake Lemon	8/16/05	39.25315	-86.3692	67	3.0	1		1						1	1
Lake Lemon	8/16/05	39.25408	-86.3693	68	3.0	1		1						1	1
Lake Lemon	8/16/05	39.25554	-86.3688	69	3.0	2		2						1	1
Lake Lemon	8/16/05	39.25746	-86.3686	70	3.0	1		1						1	1
Lake Lemon	8/16/05	39.25914	-86.3672	71	3.0	2		2						1	1
Lake Lemon	8/16/05	39.25997	-86.3666	72	2.0	5		5						1	1
Lake Lemon	8/16/05	39.26112	-86.3652	73	2.0	5		5						1	1
Lake Lemon	8/16/05	39.26149	-86.366	74	2.0	2		2						1	1
Lake Lemon	8/16/05	39.26113	-86.3672	75	2.0	2		2						1	1
Lake Lemon	8/16/05	39.26059	-86.3677	76	3.0	2		2						1	1
Lake Lemon	8/16/05	39.25986	-86.3679	77	3.0	2		2						1	1
Lake Lemon	8/16/05	39.25862	-86.3682	78	2.0	2		2				1		2	2
Lake Lemon	8/16/05	39.25849	-86.3687	79	3.0	2		2						1	1
Lake Lemon	8/16/05	39.2591	-86.3693	80	3.0	2		2						1	1
Lake Lemon	8/16/05	39.26006	-86.3705	81	3.0	3		3						1	1
Lake Lemon	8/16/05	39.26058	-86.3712	82	1.0	3	1	3						2	1
Lake Lemon	8/16/05	39.25963	-86.3718	83	3.0	5		5						1	1
Lake Lemon	8/16/05	39.25965	-86.373	84	4.0									0	0
Lake Lemon	8/16/05	39.25977	-86.3742	85	4.0	1		1						1	1
Lake Lemon	8/16/05	39.25967	-86.3755	86	3.0									0	0
Lake Lemon	8/16/05	39.26049	-86.3761	87	3.0	3		3						1	1
Lake Lemon	8/16/05	39.26041	-86.3767	88	4.0	1		1						1	1
Lake Lemon	8/16/05	39.25976	-86.3775	89	5.0									0	0
Lake Lemon	8/16/05	39.25924	-86.3777	90	5.0									0	0
Lake Lemon	8/16/05	39.25874	-86.378	91	6.0									0	0
Lake Lemon	8/16/05	39.25832	-86.3782	92	6.0									0	0
Lake Lemon	8/16/05	39.25772	-86.3785	93	5.0									0	0
Lake Lemon	8/16/05	39.25712	-86.379	94	4.0	3		3						1	1
Lake Lemon	8/16/05	39.25614	-86.3793	95	5.0									0	0
Lake Lemon	8/16/05	39.25556	-86.3797	96	7.0									0	0
Lake Lemon	8/16/05	39.25495	-86.3802	97	9.0									0	0
Lake Lemon	8/16/05	39.2542	-86.381	98	6.0									0	0
Lake Lemon	8/16/05	39.25456	-86.3816	99	5.0									0	0
Lake Lemon	8/16/05	39.25486	-86.3822	100	4.0									0	0
Lake Lemon	8/16/05	39.25548	-86.3826	101	6.0									0	0
Lake Lemon	8/16/05	39.25623	-86.3826	102	5.0									0	0
Lake Lemon	8/16/05	39.25682	-86.3829	103	5.0	2	2							1	0
Lake Lemon	8/16/05	39.25742	-86.3836	104	5.0	1	1							1	0
Lake Lemon	8/16/05	39.25794	-86.3838	105	7.0									0	0
Lake Lemon	8/16/05	39.25856	-86.3834	106	5.0									0	0
Lake Lemon	8/16/05	39.25895	-86.3825	107	4.0									0	0
Lake Lemon	8/16/05	39.25943	-86.3819	108	4.0	1					1			1	1
Lake Lemon	8/16/05	39.25929	-86.3825	109	3.0	3		1	1		2			3	3
Lake Lemon	8/16/05	39.25921	-86.3833	110	4.0	3	3							1	0
Lake Lemon	8/16/05	39.25954	-86.3843	111	4.0									0	0
Lake Lemon	8/16/05	39.26006	-86.3849	112	7.0									0	0
Lake Lemon	8/16/05	39.26133	-86.3835	113	3.0	4		4						1	1

Species Codes	
BIBE	Bur marigold
CEDE4	Coontail
CH?AR	Chara
ELCA7	Elodea
LEMN	Duckweeds
MYHE	Broadleaf watermilfoil
MYSI	Northern watermilfoil
MYSP2	Eurasian watermilfoil
MYVE	Whorled watermilfoil
NAFL	Slender naiad
NAGU	Southern waternymph
NAMA	Spiny naiad
NAMI	Brittle waternymph
NELU	American lotus
NI?TE	Nitella
NOAQVG	No aquatic vegetation
NULU	Yellow pond lily
NYTU	White water lily
POAM	Large-leaf pondweed
POCR3	Curly-leaf pondweed
POFO3	Leafy pondweed
POGR8	Variable pondweed
POIL	Illinois pondweed
PONO2	American pondweed
POPE6	Sago pondweed
POPR5	White-stemmed pondweed
POPU7	Small pondweed
PORI2	Richardson's pondweed
POZO	Flat-stemmed pondweed
UTMA	Common bladderwort
VAAM3	Wild celery, eel grass
WO?LF	Watermeal
ZAPA	Horned pondweed
ZODU	Water stargrass
Count	34

Lake	Date	Latitude	Longitude	Site	Depth	RAKE	MYSP2	CEDE4	NAMI	POPE6	POPU7	ELCA7	POZO	SpeNum	NatSpeNum	Species Codes	
Lake Lemon	8/16/05	39.26113	-86.3843	114	5.0	1		1						1	1	BIBE	Bur marigold
Lake Lemon	8/16/05	39.2605	-86.3858	115	5.0									0	0	CEDE4	Coontail
Lake Lemon	8/16/05	39.26066	-86.3865	116	6.0									0	0	CH?AR	Chara
Lake Lemon	8/16/05	39.26156	-86.3874	117	4.0	1	1							1	0	ELCA7	Elodea
Lake Lemon	8/16/05	39.26179	-86.3886	118	3.0	1	1							1	0	LEMN	Duckweeds
Lake Lemon	8/16/05	39.26232	-86.3895	119	4.0									0	0	MYHE	Broadleaf watermilfoil
Lake Lemon	8/16/05	39.26287	-86.3899	120	4.0									0	0	MYSI	Northern watermilfoil
Lake Lemon	8/16/05	39.2632	-86.3903	121	3.0									0	0	MYSP2	Eurasian watermilfoil
Lake Lemon	8/16/05	39.26315	-86.3908	122	3.0									0	0	MYVE	Whorled watermilfoil
Lake Lemon	8/16/05	39.26285	-86.3917	123	4.0	1		1						1	1	NAFL	Slender naiad
Lake Lemon	8/16/05	39.26307	-86.3924	124	2.0	1	1		1					2	1	NAGU	Southern waternymph
Lake Lemon	8/16/05	39.26306	-86.3932	125	4.0									0	0	NAMA	Spiny naiad
Lake Lemon	8/16/05	39.26268	-86.3946	126	3.0	1					1			1	1	NAMI	Brittle waternymph
Lake Lemon	8/16/05	39.26275	-86.3958	127	3.0									0	0	NELU	American lotus
Lake Lemon	8/16/05	39.2628	-86.3969	128	3.0									0	0	NI?TE	Nitella
Lake Lemon	8/16/05	39.26308	-86.3981	129	3.0									0	0	NOAQVG	No aquatic vegetation
Lake Lemon	8/16/05	39.26284	-86.399	130	10.0									0	0	NULU	Yellow pond lily
Lake Lemon	8/16/05	39.26283	-86.3998	131	7.0									0	0	NYTU	White water lily
Lake Lemon	8/16/05	39.26345	-86.4005	132	11.0									0	0	POAM	Large-leaf pondweed
Lake Lemon	8/16/05	39.26373	-86.4013	133	3.0									0	0	POCR3	Curly-leaf pondweed
Lake Lemon	8/16/05	39.26422	-86.4023	134	5.0									0	0	POFO3	Leafy pondweed
Lake Lemon	8/16/05	39.26487	-86.4029	135	5.0									0	0	POGR8	Variable pondweed
Lake Lemon	8/16/05	39.26524	-86.4033	136	4.0									0	0	POIL	Illinois pondweed
Lake Lemon	8/16/05	39.26611	-86.4034	137	3.0	1		1						1	1	PONO2	American pondweed
Lake Lemon	8/16/05	39.26683	-86.4044	138	3.0									0	0	POPE6	Sago pondweed
Lake Lemon	8/16/05	39.26713	-86.4061	139	8.0									0	0	POPR5	White-stemmed pondweed
Lake Lemon	8/16/05	39.2671	-86.4072	140	7.0									0	0	POPU7	Small pondweed
Lake Lemon	8/16/05	39.26785	-86.4098	141	10.0									0	0	PORI2	Richardson's pondweed
Lake Lemon	8/16/05	39.26837	-86.4103	142	5.0									0	0	POZO	Flat-stemmed pondweed
Lake Lemon	8/16/05	39.26866	-86.4106	143	4.0									0	0	UTMA	Common bladderwort
Lake Lemon	8/16/05	39.26906	-86.4109	144	2.0	1	1							1	0	VAAM3	Wild celery, eel grass
Lake Lemon	8/16/05	39.26913	-86.4115	145	5.0									0	0	WO?LF	Watermeal
Lake Lemon	8/16/05	39.26988	-86.4122	146	4.0	1	1							1	0	ZAPA	Horned pondweed
Lake Lemon	8/16/05	39.27007	-86.4135	147	6.0									0	0	ZODU	Water stargrass
Lake Lemon	8/16/05	39.26985	-86.4147	148	3.0	2			2					1	1		
Lake Lemon	8/16/05	39.27068	-86.4153	149	5.0	1			1					1	1	Count	34
Lake Lemon	8/16/05	39.27165	-86.4158	150	4.0	1	1		1					2	1		
Lake Lemon	8/16/05	39.27247	-86.4163	151	6.0									0	0		
Lake Lemon	8/16/05	39.27326	-86.417	152	10.0									0	0		
Lake Lemon	8/16/05	39.27384	-86.4175	153	6.0	1	1							1	0		
Lake Lemon	8/16/05	39.27389	-86.4191	154	5.0									0	0		
Lake Lemon	8/16/05	39.27341	-86.4191	155	5.0									0	0		
Lake Lemon	8/16/05	39.27269	-86.4197	156	4.0									0	0		
Lake Lemon	8/16/05	39.27222	-86.4208	157	9.0									0	0		
Lake Lemon	8/16/05	39.27221	-86.4215	158	3.0	3	3		1					2	1		
Lake Lemon	8/16/05	39.27288	-86.4221	159	3.0									0	0		
Lake Lemon	8/16/05	39.27295	-86.4232	160	6.0									0	0		
Lake Lemon	8/16/05	39.27243	-86.4235	161	5.0									0	0		
Lake Lemon	8/16/05	39.27131	-86.424	162	7.0									0	0		
Lake Lemon	8/16/05	39.27143	-86.4252	163	8.0									0	0		
Lake Lemon	8/16/05	39.27234	-86.4256	164	9.0									0	0		
Lake Lemon	8/16/05	39.27193	-86.4275	165	8.0									0	0		
Lake Lemon	8/16/05	39.27117	-86.4271	166	5.0									0	0		
Lake Lemon	8/16/05	39.26991	-86.4261	167	8.0									0	0		
Lake Lemon	8/16/05	39.26854	-86.424	168	7.0									0	0		
Lake Lemon	8/16/05	39.2678	-86.4221	169	4.0	3	1				3			2	1		
Lake Lemon	8/16/05	39.26726	-86.4213	170	6.0									0	0		
Lake Lemon	8/16/05	39.26611	-86.4222	171	4.0									0	0		
Lake Lemon	8/16/05	39.26554	-86.4221	172	5.0									0	0		
Lake Lemon	8/16/05	39.26459	-86.4221	173	5.0	1							1	1	1		
Lake Lemon	8/16/05	39.26377	-86.4224	174	2.0									0	0		
Lake Lemon	8/16/05	39.26373	-86.4217	175	5.0									0	0		
Lake Lemon	8/16/05	39.26337	-86.4209	176	7.0									0	0		
Lake Lemon	8/16/05	39.26265	-86.4196	177	10.0									0	0		
Lake Lemon	8/16/05	39.26215	-86.4189	178	9.0									0	0		
Lake Lemon	8/16/05	39.26141	-86.4188	179	5.0									0	0		
Lake Lemon	8/16/05	39.26094	-86.419	180	2.0	1	1		1					2	1		
Lake Lemon	8/16/05	39.26142	-86.4184	181	4.0									0	0		
Lake Lemon	8/16/05	39.26186	-86.418	182	6.0									0	0		
Lake Lemon	8/16/05	39.2651	-86.4172	183	3.0	1			1	1	1			3	3		
Lake Lemon	8/16/05	39.26571	-86.4172	184	4.0	4			4					1	1		
Lake Lemon	8/16/05	39.26612	-86.4173	185	2.0									0	0		
Lake Lemon	8/16/05	39.26594	-86.4166	186	3.0	1			1	1	1			3	3		
Lake Lemon	8/16/05	39.2654	-86.4169	187	2.0	5			5				1	2	2		
Lake Lemon	8/16/05	39.26497	-86.4171	188	3.0	2			1		1			2	2		
Lake Lemon	8/16/05	39.26217	-86.4172	189	8.0									0	0		
Lake Lemon	8/16/05	39.26227	-86.4167	190	7.0									0	0		
Lake Lemon	8/16/05	39.2623	-86.4161	191	3.0	1	1							1	0		
Lake Lemon	8/16/05	39.26256	-86.4156	192	3.0									0	0		
Lake Lemon	8/16/05	39.2627	-86.4151	193	4.0	1	1		1					2	1		
Lake Lemon	8/16/05	39.26291	-86.4146	194	5.0									0	0		
Lake Lemon	8/16/05	39.26288	-86.4142	195	2.0	1	1							1	0		
Lake Lemon	8/16/05	39.26257	-86.414	196	2.0									0	0		
Lake Lemon	8/16/05	39.26254	-86.4137	197	1.0		1							1	0		
Lake Lemon	8/16/05	39.2629	-86.414	198	5.0									0	0		
Lake Lemon	8/16/05	39.26299	-86.4135	199	5.0									0	0		
Lake Lemon	8/16/05	39.2627	-86.4128	200	4.0	1	1							1	0		

Vegetation Control Permit Application

APPLICATION FOR AQUATIC VEGETATION CONTROL PERMIT
State Form 26727 (R / 11-03)
Approved State Board of Accounts 1987
☐ Whole Lake ☒ Multiple Treatment Areas
Check type of permit
INSTRUCTIONS: Please print or type information

FOR OFFICE USE ONLY
License No.
Date Issued
Lake County

Return to: Page 1 of 9
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Commercial License Clerk
402 West Washington Street, Room W273
Indianapolis, IN 46204

FEE: $5.00

Applicant's Name	Lake Assoc. Name	
Lake Lemon Conservancy District	Lake Lemon Conservancy District	
Rural Route or Street: 7599 N. Tunnel Road		Phone Number: 812-334-0233
City and State: Unionville, IN		ZIP Code: 47468
Certified Applicator (if applicable)	Company or Inc. Name	Certification Number
Rural Route or Street		Phone Number
City and State		ZIP Code

Lake (One application per lake)	Nearest Town	County
Lake Lemon	Unionville	Monroe-Brown
Does water flow into a water supply		☐ Yes ☒ No

Please complete one section for *EACH* treatment area. Attach lake map showing treatment area and denote location of any water supply intake.

Treatment Area # 1	LAT/LONG or UTM's Maint. Line N39° 15.687' W86° 21.850' to N39°15.097' W86° 22.083'		
Total acres to be controlled 25	Proposed shoreline treatment length (ft)	Perpendicular distance from shoreline (ft)	
Maximum Depth of Treatment (ft) 4	Expected date(s) of treatment(s) Mid August with follow-up in early September		

Treatment method: ☒ Chemical ☐ Physical ☐ Biological Control ☐ Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Glyphosate and/or Imazapyr for control of Lotus which expands beyond maintenance line and to open boat channels, spatterdock will be treated in boat channels only.

Plant survey method: ☐ Rake ☒ Visual ☐ Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
American Lotus	X	70
Eurasian watermilfoil		3
Coontail		20
Spatterdock	X	5
Chara		1
Elodea		1

AQUATIC CONTROL

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Treatment Area # 2	LAT/LONG or UTM's Maint. Line N39° 15.664' W86° 22.386' to N39° 15.689' W86° 22.246'		
Total acres to be controlled 5	Proposed shoreline treatment length (ft)	Perpendicular distance from shoreline (ft)	
Maximum Depth of Treatment (ft) 6	Expected date(s) of treatment(s) Mid August with touch-up treatment in early to mid September		
Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical			
Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Glyphosate will be used for control of Lotus which expands beyond maintenance line			
Plant survey method: [x] Rake [ ] Visual [ ] Other (specify)			

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
American Lotus	X	85
Eurasian watermilfoil		5
Coontail		10

Treatment Area # 3	LAT/LONG or UTM's N39.26324 W86.41325 to N39.26719 W86.42228		
Total acres to be controlled 13	Proposed shoreline treatment length (ft) 11500	Perpendicular distance from shoreline (ft) 50	
Maximum Depth of Treatment (ft) 8	Expected date(s) of treatment(s) Late May initial treatment with follow-up in July		
Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical			
Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, natives will only be treated to keep boat lanes open			
Plant survey method: [x] Rake [ ] Visual [ ] Other (specify)			

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	50
Coontail	x	20
Chara		10
Curlyleaf pondweed	x	20

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Treatment Area #	4	LAT/LONG or UTM's	N39.27277 W86.42229 to N39.2277 W86.41664	
Total acres to be controlled	4.04	Proposed shoreline treatment length (ft)	2500	Perpendicular distance from shoreline (ft) 50
Maximum Depth of Treatment (ft)	6	Expected date(s) of treatment(s)	Late may initial treatment with follow-up in early July	

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol for small pondweed if they reach nuisance levels

Plant survey method: [X] Rake [ ] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	30
Curlyleaf pondweed	x	30
American Pondweed		5
Small Pondweed	X	15
Coontail	x	10
Chara		10

Treatment Area #	5	LAT/LONG or UTM's	N39.27007 W86.41325 to N39.26719 W86.42228	
Total acres to be controlled	2.82	Proposed shoreline treatment length (ft)	2000	Perpendicular distance from shoreline (ft) 50
Maximum Depth of Treatment (ft)	6	Expected date(s) of treatment(s)	Initial treatment in late May with follow-up in July	

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol for small pondweed if they reach nuisance levels

Plant survey method: [X] Rake [ ] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	50
Curlyleaf pondweed	X	30
Small Pondweed	X	20

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Treatment Area #	6	LAT/LONG or UTM's	N39.26440 W86.40284 to N39.26307 W86.39884		
Total acres to be controlled	2.71	Proposed shoreline treatment length (ft)	1750	Perpendicular distance from shoreline (ft)	50
Maximum Depth of Treatment (ft)	6	Expected date(s) of treatment(s)	Initial treatment in late May with follow-up in early July		

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol for small pondweed if they reach nuisance levels

Plant survey method: [X] Rake [ ] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	50
Curlyleaf pondweed	X	30
American pondweed		5
Small pondweed	X	15

Treatment Area #	7	LAT/LONG or UTM's	N39.26282 W86.39708 to N39.26046 W86.37590		
Total acres to be controlled	24.96	Proposed shoreline treatment length (ft)	13780	Perpendicular distance from shoreline (ft)	50
Maximum Depth of Treatment (ft)	6	Expected date(s) of treatment(s)	Initial treatment in late May with follow-up in early July		

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol for small pondweed & coontail if they reach nuisance levels

Plant survey method: [X] Rake [ ] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	50
Curlyleaf pondweed	X	30
American Pondweed		2
Chara	X	3
Coontail	X	10
Small Pondweed	X	5

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Treatment Area #	8	LAT/LONG or UTM's	N39.26148 W86.37091 to N39.26110 W86.36442	
Total acres to be controlled	7.39	Proposed shoreline treatment length (ft)	3500	Perpendicular distance from shoreline (ft) 50
Maximum Depth of Treatment (ft)	4	Expected date(s) of treatment(s)	Initial treatment in late May with follow-up in early July	

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol/Reward for small pondweed & coontail if they reach nuisance levels

Plant survey method: [X] Rake [ ] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	40
Coontail	X	40
American Lotus		5
Chara		5
American Pondweed		5
Elodea	X	5

Treatment Area #	9	LAT/LONG or UTM's	Boat lanes (see map)	
Total acres to be controlled	7.5	Proposed shoreline treatment length (ft)		Perpendicular distance from shoreline (ft)
Maximum Depth of Treatment (ft)	4	Expected date(s) of treatment(s)	Initial treatment in late May with follow-up in early July	

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol/Reward for small pondweed & coontail if they reach nuisance levels

Plant survey method: [X] Rake [X] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	5
Coontail	X	50
American Lotus		15
Chara		5
Brittle naiad		5
Spatterdock		5
Elodea	X	15

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Treatment Area #	10	LAT/LONG or UTM's	N39.25131 W86.36853 to N39.25097 W86.37124		
Total acres to be controlled	3.55	Proposed shoreline treatment length (ft)	1800	Perpendicular distance from shoreline (ft)	50
Maximum Depth of Treatment (ft)	4	Expected date(s) of treatment(s)	Initial treatment in late May with follow-up in early July		

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol/Reward for small pondweed & coontail if they reach nuisance levels

Plant survey method: [X] Rake [ ] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	40
Coontail	X	40
Small pondweed	X	10
Chara		2
American Pondweed		3
Elodea	X	5

Treatment Area #	11	LAT/LONG or UTM's	N39.25161 W86.38692 to N39.25166 W86.39856		
Total acres to be controlled	10.34	Proposed shoreline treatment length (ft)	6200	Perpendicular distance from shoreline (ft)	50
Maximum Depth of Treatment (ft)	4	Expected date(s) of treatment(s)	Initial treatment in late May with follow-up in early July		

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol for small pondweed & coontail if they reach nuisance levels

Plant survey method: [X] Rake [X] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	50
American water willow		10
Coontail	X	20
Curlyleaf pondweed	X	20

Treatment Area #	12	LAT/LONG or UTM's	N39.25217 W86.40355 (center of bed)
Total acres to be controlled	0.5	Proposed shoreline treatment length (ft)	Perpendicular distance from shoreline (ft)
Maximum Depth of Treatment (ft)	4	Expected date(s) of treatment(s)	Initial treatment in late May with follow-up in early July

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol for small pondweed & coontail if they reach nuisance levels

Plant survey method: [X] Rake [ ] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	40
Coontail	X	50
Water willow		10

Treatment Area #	13	LAT/LONG or UTM's	N39.25466 W86.40621 to N39.25874 W86.40776		
Total acres to be controlled	3.56	Proposed shoreline treatment length (ft)	2125	Perpendicular distance from shoreline (ft)	50
Maximum Depth of Treatment (ft)	4	Expected date(s) of treatment(s)	Initial treatment in late May with follow-up in early July		

Treatment method: [X] Chemical [ ] Physical [ ] Biological Control [ ] Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil, Aquathol for small pondweed & coontail if they reach nuisance levels

Plant survey method: [X] Rake [X] Visual [ ] Other (specify)

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	55
Curlyleaf pondweed	X	20
Small pondweed	X	5
Coontail	X	20

Treatment Area # 14		LAT/LONG or UTM's Throughout Lake	
Total acres to be controlled		Proposed shoreline treatment length (ft)	Perpendicular distance from shoreline (ft)
Maximum Depth of Treatment (ft) 6		Expected date(s) of treatment(s) Initial treatment in late May with follow-up in early July	

Treatment method: ☐ Chemical ☐ Physical ☐ Biological Control ☐ Mechanical

Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking rate for biological control. Renovate for selective control of Eurasian watermilfoil throughout entire lake (see 2004 avmp and 2005 update)

Plant survey method: ☒ Rake ☐ Visual ☐ Other (specify) Data from August 2004 Tier II plant sampling

Aquatic Plant Name	Check if Target Species	Relative Abundance % of Community
Eurasian watermilfoil	X	45
Coontail		20
Brittle naiad		5
Small pondweed		5
Chara		2
Curlyleaf pondweed		1
American elodea		1
Horned pondweed		1
Curlyleaf pondweed		20

INSTRUCTIONS: Whoever treats the lake fills in "Applicant's Signature" unless they are a professional. If they are a professional company who specializes in lake treatment, they should sign on the "Certified Applicant" line.

Applicant Signature	Date
Certified Applicant's Signature	Date

FOR OFFICE ONLY

☐ Approved ☐ Disapproved	Fisheries Staff Specialist
☐ Approved ☐ Disapproved	Environmental Staff Specialist

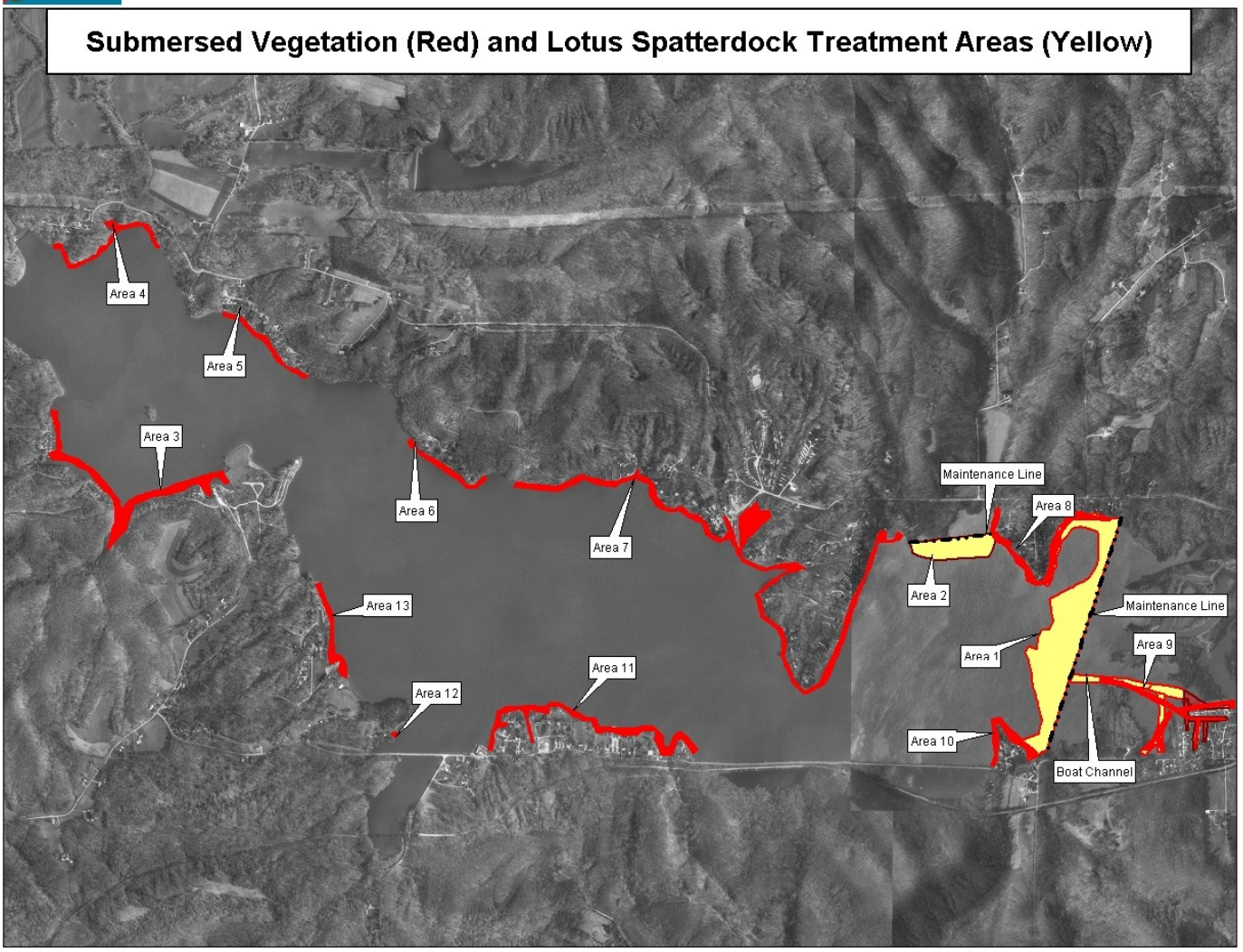
Mail check or money order in the amount of $5.00 to:

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FISH AND WILDLIFE
COMMERCIAL LICENSE CLERK
402 WEST WASHINGTON STREET ROOM W273
INDIANAPOLIS, IN 46204

AQUATIC CONTROL

Vegetation Control Permit Application Map-Page 9

DeLORME XMap® 4.5



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MN (3.6° W)

0 600 1200 1800 2400 3000 3600 ft
Data Zoom 13-0